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# PENNSYLVANIA GAME NEWS

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SPORTSMEN PLANTING GAME FOOD

Vol. VII, No. 1

APRIL, 1936



# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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Permission to reprint will be granted providing proper credit is given.

Entered as second class matter, June 24, 1935 at the Post Office at Harrisburg, Pa., under the Act of March 3, 1879.

## JUST TO REMIND YOU—

That Governor Earle set aside April 17 and 24 as Bird Days in Pennsylvania, the 17th in the southern counties and the 24th in the northern counties. PUT UP MORE BIRD BOXES!

To plant Food for Game. Get Farmers or 4-H clubs to Help.

To Prevent Forest Fires.

To Control Stray Cats and Dogs.

To Assist Your Game Protector.



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# EDITORIAL

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VOLUME VII

APRIL, 1936

NUMBER 1

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## THE NEXT TWENTY YEARS

**T**HOSE who carefully digested Major Biddle's address to the North American Wildlife Conference, printed in full in the last issue of the GAME NEWS, could not fail to grasp the significance of the analysis and deductions made by the President of the Commission.

The test of Pennsylvania's game management system is not what happened during the past forty years, but the question clearly is: What about the next twenty years?

Unfortunately the deer problem, and the running fight incident thereto, has attracted so much attention that the serious plight of small game has been overshadowed, and often entirely overlooked by interested sportsmen.

As stated by Major Biddle, Pennsylvania has reached its "upper ceiling" in deer abundance until such time as lumbering operations again become common, instead of the exception. (In the meantime Pennsylvania's hunters must be content to struggle along with a somewhat smaller deer herd.)

While the deer problem must not be neglected, increasing attention must be given to small game requirements. After all, the majority of our hunters pursue small game, and the big job ahead is the development of processes which will assure proper food and cover management to produce a maximum annual crop of small game, and on a sustained yield basis.

Enforcements of the laws and the mere regulation of those who hunt, extensive restocking, predator control, and large purchases of lands for refuges and hunting grounds will not meet the demands of a growing army of hunters. It is out of the question to purchase any appreciable acreage of game lands in agricultural territory where most of our small game hunting occurs.

One of the vitally important problems to be solved is how to produce more of our own native game in a normal wild state. We must find ways to assure an ample food supply for small game, especially so it will be on the ground before the heavy snows of winter begin to devastate the seed stock saved. And the practice of posting lands against hunting must be stemmed wherever and however possible.

All of these problems require intensive study and planning by the sportsmen of Pennsylvania, as well as by the Game Commission. Better read Major Biddle's address again. What are you doing to help solve the problems he outlined?



## A STRONGER WORKING STAFF

**T**HE Pennsylvania Game Commission has developed a very efficient field staff, composed of men who are vitally interested in wildlife restoration. However, as the work has expanded, and the problems of game administration and management have become increasingly complex, the need for more efficient methods to develop trained workers has become evident.

After all, the only way to build a strong organization of any kind is to have a solid foundation, then give those who demonstrate initiative and ability a chance to advance as their experience justifies.

That is exactly what the Commission had in mind when it announced the first Student Officers Training School in the United States for game administrative work, and discontinued the former county examination system for filling vacancies, a method which had outlived its usefulness.

And that also is the chief reason for the recent re-assignment of all its Division Supervisors, and changing its former Assistant District Protectors into a flying squadron of Traveling Protectors, under the direct supervision of the Commission's regional leaders.

In the past, too few of the Department's efficient workers have had the necessary statewide experience to fit them for higher administrative responsibilities, and quick and effective action was impossible with the majority of its staff restricted to limited fields of endeavor.

In the future the Commission feels confident its regular forces in the field, which can be supplemented at a moment's notice with an efficient corps of Deputy Protectors, will be able to cope with any problems that may arise; and when vacancies develop there always will be an adequate number of efficiently trained men to step into the breach.

SETH GORDON

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# Spending the Sportsman's Dollar

By N. E. Slaybaugh  
Comptroller

PENNSYLVANIA today enjoys her great game system, not just by chance, but because a few far-sighted conservationists forty years ago sensed the alarming need for drastic action to conserve what game was left as a nucleus to lay the foundation for a system which has succeeded in changing Pennsylvania from a condition aptly described by many as a "shot out state" to one of the best game states in the Union. To the men who pioneered in game conservation in Pennsylvania, we owe an everlasting debt of gratitude for the courage of their convictions, which resulted in certain important developments, chief among which are:

First: The creation of the Board of Game Commissioners in 1895.

Second: Enactment of sane and practical game laws, which, for the first time, outlawed those practices which were responsible for wildlife decimation, and the rigid enforcement thereof without fear or favor.

Third: Enactment of the Hunters' License Law in 1913, which for the first time gave to the Board of Game Commissioners a continuing source of revenue to carry on the important work delegated by Acts of Assembly. Prior to 1913, the Board was entirely dependent upon appropriations from general taxation to carry on the work. The appropriations from 1895 to 1913 amounted to \$289,400.00, or 23% of the revenue credited to the "Game Fund" during the year which ended May 31, 1935, all of which was made available for the sportsmen's own enterprise.

Fourth: Acts of Assembly authorizing the establishment of game refuges on both State forests and leased lands; the amendments to said statutes which permitted the purchase of lands for refuges and hunting grounds. Great impetus was given to the State Game Land purchasing program in 1927 when the General Assembly, at the request of sportsmen themselves, increased the resident hunter's license fee from \$1.25 to \$2.00, conditioned that the increase of seventy-five cents (75c) shall be used exclusively for the creation, acquisition (by purchase, lease or otherwise), and the maintenance of public hunting grounds and game refuges. The sportsmen now own 491,318 acres of State Game Lands and maintain 193 game refuges, which have been and will continue to be a great factor in keeping Pennsylvania in the front line ranks.

Fifth: The organized sportsmen of Pennsylvania have, through the years, stood by their Game Commission and rendered very valuable service in many ways, without which it would have been impossible to have achieved success.

Sixth: The establishment and successful operation of the game farms where thousands of game birds are raised annually and released in suitable covers in the State.

The County Treasurers are agents of the

Commonwealth for the issuance of hunting licenses. For this service they are allowed to retain for their own use the sum of ten cents from the amount paid for each resident hunter's license, and fifty cents from the amount paid for each non-resident hunter's license. The balances arising from this source are remitted by the County Treasurers to the State Treasurer, through the Department of Revenue. All such monies are placed in the Game Fund by the State Treasurer.

The Game Fund is considered a "special fund," and is held separately and apart solely for the payment of expenses incident to game restoration, game protection, payment of bounties, land purchase program, maintenance of state game lands, operation of game farms, purchase of game, administration, etc. The sportsmen have in the past defeated every move to divert the Game Fund, or to merge it with other State funds.

In addition to the ear-marked fund of seventy-five cents (75c), as noted above, provision is also made for the following special allocations:

For building deer-proof fences to protect farm crops and fruit orchards against damages from wild deer, the sum of \$10,000.00 during any one fiscal year.

For the payment of certain claims for damages done to live stock, poultry, or bees

by bears, the sum of \$3,000 during any one fiscal year.

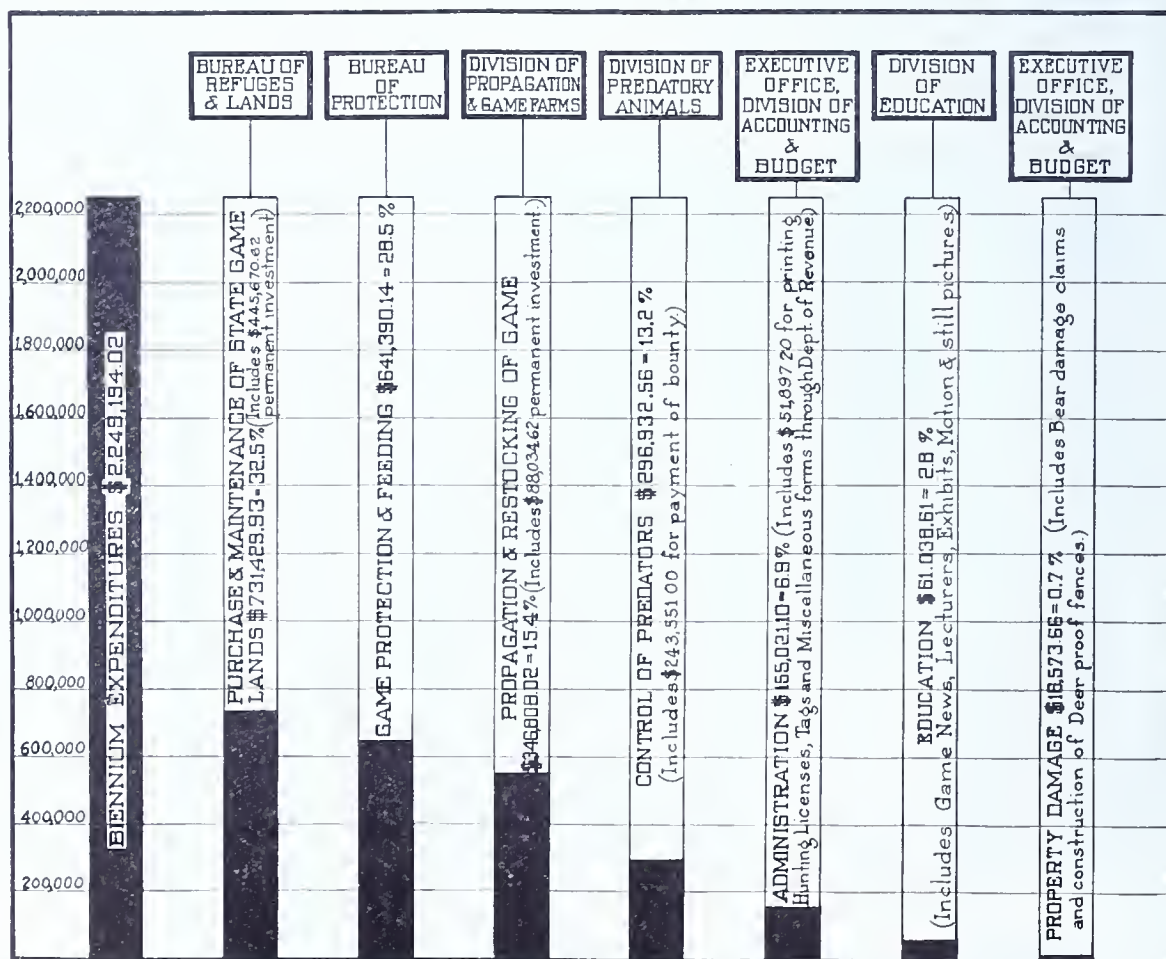
The sum of not less than \$100,000, or so much thereof as can be used judiciously for that purpose, shall be expended each fiscal year for the purchase or propagation of game for stocking purposes, the distribution of game, and to supply feed for game, including expenses in connection therewith.

For the payment of rewards for the killing of the following animals: For each wild cat, \$15.00; for each gray fox, \$4.00; for each weasel, \$1.00, and for each goshawk, killed between the first day of November and the first day of May of the next following year, \$5.00. For the year which ended May 31, 1935, there was paid from the Game Fund \$114,572.00 for the payment of bounty claims.

Last year Hon. John Q. Creveling, Member of the Game Commission, made a very critical analysis of the budgetary allocations of the \$2.00 license fee paid by each resident hunter. It may interest the readers of the GAME NEWS to note what the subdivision of each \$2.00 fee is approximately, as based on the budgetary estimate of the probable number of licenses to be sold during a particular year.

As has been noted, certain allocations of the budget are based upon statutory require-

FUNCTIONAL EXPENDITURES FOR BIENNIUM, JUNE 1, 1933 TO MAY 31, 1935





ments. The balance is available for general protection and administrative purposes.

The subdivision of each \$2.00 fee, as worked out by Mr. Creveling, is approximately as follows:

To County Treasurers, for issuing the license .....	\$ .10
To the Department of Revenue, for printing licenses, tags, etc. ....	.04
To the purchase of game lands, the creation of refuges, and the maintenance of game lands and refuges ....	.75
For bounties, and expenses of the Bounty Section, on the budget estimate of licenses .....	.27
Statutory requirement for the purchase or propagation of game and feeding of game .....	.20
For deer-proof fences .....	.02
For bear damages .....	.01
For insurance .....	.02
State Employees' Retirement Fund ....	.02
<b>Total statutory requirements ..</b>	<b>\$1.43</b>

Balance available to the Game Commission for all other expenses of game-administration (which includes general protection, law enforcement, game propagation and distribution above statutory requirements, research, education, and administration) ..... .57

Total fee paid by each resident hunter \$2.00

The income from resident hunters' licenses must be estimated conservatively in advance for budgetary purposes. That income is supplemented by \$150,000 to \$200,000 annually, derived from the sale of non-resident hunting licenses, game law penalties, sale of special licenses, interest on deposits, and miscellaneous sources.

We have pointed out in this article the splendid accomplishments of the men who pioneered in game conservation, the contributions made by others, and, last but not least, the sportsmen of Pennsylvania are greatly indebted to the farmers of this State for the courtesy extended these many years in permitting them to hunt on their lands.

The importance of the farmer in our present and future conservation program cannot be over-emphasized. Let us not be satisfied with merely respecting the rights of the farmer (who is a potential game farmer) but let us put forth our best efforts to bring to justice the hunter who persists in vandalism. As we succeed in this, we shall see less posted land, which will bring great satisfaction to the fraternity of true sportsmen.

Each licensed hunter is a stockholder in this great corporation and is, no doubt, interested in knowing how his money has been spent, and it is hoped the information given in the chart herewith will be helpful. A stockholder is not content with the mere possession of a certificate which proves ownership of so many shares of stock, but of primary importance is the dividends which the stock pays. Is this not true of a stockholder in this organization? The sportsman is not satisfied with sole ownership of his hunter's license certificate and tag; he ex-

HOW THE SPORTSMEN'S MONEY WAS EXPENDED				
TWO FISCAL YEARS				
JUNE 1, 1933 TO MAY 31, 1935				
	June 1, 1933 to May 31, 1934 (A)	June 1, 1934 to May 31, 1935 (B)	June 1, 1934 to May 31, 1935 (C)	June 1, 1934 to May 31, 1935 (D)
Balance in Game Fund June 1 .....	\$ 799,277.45		\$ 706,823.00	
Revenue:				
Net Revenue from Hunters' Licenses .....	1,069,056.50		1,169,341.85	
Penalties, Special Licenses, Interest on Deposits, etc. ....	65,608.31		66,554.12	
Total Available .....	\$1,933,942.26		\$1,942,718.97	
<b>Disbursements:</b>		Part of Each Dollar		Part of Each Dollar
1. Salaries .....	\$ 237,005.16	.242	\$ 289,014.86	.272
2. Traveling Expenses of Salaried Employees .....	99,481.03	.084	106,397.80	.100
3. Deputy Game Protectors—Wages and Expenses ....	57,707.56	.049	43,546.48	.041
4. Wages Cutting Refuge, Boundary and Fire Lines and Labor at Game Farms .....	44,141.46	.037	66,519.30	.063
5. Purchase of Game (including feed and express on game) .....	75,042.66	.063	72,207.34	.068
6. Postage, Telephone, Telegraph, Express and Cartage .....	21,657.13	.018	22,888.69	.022
7. Light, Power and Fuel .....	2,742.60	.002	2,883.06	.003
8. Purchase of State Game Lands (title examinations and survey costs included) .....	263,651.37	.222	176,298.79	.166
9. Fixed Charges in Lieu of Taxes .....	18,662.01	.016	21,530.50	.020
10. Buildings and Construction .....	46,864.02	.039	21,299.25	.020
11. Establishing New Game Refuges .....			11,752.40	.011
12. Repairs to Buildings, Grounds and Equipment ....	1,140.58	.001	1,306.27	.001
13. Equipment .....	12,526.84	.011	5,080.99	.005
14. Miscellaneous Supplies .....	18,995.30	.016	21,716.83	.021
15. Motor Equipment, Accessories and Maintenance ....	16,926.88	.014	11,932.62	.011
16. Insurance .....	7,788.40	.007	7,838.62	.007
17. Rentals (auto storage, equipment, etc.) .....	3,459.04	.003	2,334.10	.002
18. Advancement Account .....	39,946.00 +		39,874.00	
19. Bounty Claims .....	128,979.00	.109	114,572.00	.108
20. Return of Certain Fines as Provided by Law .....	2,072.50	.002	2,710.00	.003
21. Fees, Other Maintenance Services and Expenses ....	2,039.69	.002	8,297.13	.008
22. Deer Proof Fence and Damage by Bears .....	6,461.93	.005	10,111.78	.010
23. Live Stock (including feed) .....	1,350.26	.001	2,590.62	.002
24. Newspaper Advertising .....	9,777.58	.008	3,377.81	.003
25. Printing, Binding and Paper .....	14,914.26	.013	7,873.37	.007
26. Printing Hunters' Licenses, Tags and Miscellaneous Forms (through Department of Revenue) .....	31,367.00	.026	20,530.20	.019
27. Administering State Employees' Retirement System (through Department of State) .....	12,410.00	.010	12,410.00	.012
28. Totals .....	\$1,227,119.28		\$1,022,146.76	
29. Balance in Game Fund at Close of Business May 31	\$ 706,823.00		\$ 920,572.21	
30. Balance in Treasury Department to Credit of Game Fund at Close of Business May 31 .....	\$727,772.90		\$967,407.35	
31. Less: Vouchers Included in Above Statement in Course of Payment May 31, and subsequently paid .....	20,949.90	706,823.00	46,835.14	920,572.21
32. Less: Amount Standing to Credit of Special Fund for the Purchase and Maintenance of State Game Lands and Refuges .....	322,542.78		352,733.48	
33. Less: All Other Commitments .....	3,933.03	326,475.81	8,847.09	361,580.57
		380,347.19	558,991.64	
34. Add: Department Advancement Account, on Deposit for Payment of Bounty Claims .....	40,000.00			
35. Net Balance Available May 31 .....	\$ 420,347.19**		\$ 558,991.64**	

\* The Advancement Account (known as a temporary or revolving account) used for the payment of bounties, is withdrawn from the "Game Fund" at the beginning of the biennium and returned as a refund at the end of the biennium. It is, therefore, not considered in this report as it pertains to "Part of Each Dollar," or the "Functional Costs" indicated by the graph.

\*\* Approximate amount required for operating expenses each year after May 31, until revenue from sale of licenses for the current year is available.

This statement includes only those monies paid into and disbursed from the "Game Fund." The County Treasurers are agents of the Commonwealth for the

issuance of hunting licenses and are by law permitted to retain the sum of ten cents from the amount paid for each resident hunter's license, and fifty cents from the amount paid for each non-resident hunter's license, which amount shall be full compensation for services rendered. The fees retained by County Treasurers during the two fiscal years covered by this report amounted to \$114,096.90.

In order to efficiently administer the affairs of a Department spending over one million dollars annually, it is necessary to establish functions, or specialized activities. The graph on page 2 shows the amounts expended by functions, in relation to the total expenditures for the biennium:

pects to kill some game and to enjoy many days of healthful recreation in the fields and forests.

When we tell you that the value of the annual kill of game and fur-bearing animals taken in Pennsylvania amounts to millions of dollars in excess of the cost to produce the game crop, you will readily agree that the \$2.00 invested in a hunter's license is a gilt-edge security. This dividend is further increased when we attempt to place a value (which cannot be estimated in dollars and cents) upon wholesome recreation in the fields and forests.

If we view the conservation program from every angle, it is obvious that it is an unselfish enterprise. The protection accorded our song and insectivorous birds (which are in-

valuable to the land-owners) is made possible by the Game Fund. Another important item, which must not be overlooked, is the fact that the sportsmen of Pennsylvania spend millions of dollars annually for equipment, transportation, board and lodging, and miscellaneous hunting supplies. This vast sum benefits many Pennsylvania industries and many thousands of its citizens.

The statistical statement above, used in conjunction with this article, analyzes and indicates "How the Sportsmen's Money was Expended". This report shows the expenditures from the Game Fund for two fiscal years, also the condition of the fund at the beginning and ending of each year.

Reprints of "Spending the Sportsman's Dollar" will be sent, upon request to interested sportsmen.



# Foresters Becoming Wildlife Conscious

By W. Gard. Conklin

European foresters have for centuries recognized the existence of a direct relationship between wildlife and forests and capitalized on the economic value of game therein, but for some unaccountable reason, American foresters long overlooked or disregarded this important fact. The neglect of American foresters to realize the worth of wildlife is not easily understood since forest practices in this country are based largely on European experiences and methods, and since there was a time, in Europe, when forest officers were almost wholly occupied with game management. However, the attitude of the forestry profession of this country is rapidly changing. It is evident that most foresters and those associated with them have awakened to a realization that wildlife really does hold a very important economic place in the profession, just as do trees.

The change of attitude is of vital importance to the sportsmen of Pennsylvania with its 15,000,000 acres, over one half of the area of the State, of potential forest territory, which is likewise potential game and fish territory. Game and fish possibilities within this huge acreage can not logically be divorced from timber possibilities as they are too closely related. More than a million and a half of these thirteen million acres are in State Forests and a half million acres are in State Game Lands. The State Forests have long been managed under a decidedly practical and constructive system of sound forest practices, by an efficient group of professional foresters unequalled in any other State. Surprisingly large quantities of game, fur-bearing animals and fish are "harvested" annually from these State Forests so it is only natural for sportsmen to look to the forester for his aid in maintaining good hunting, trapping and fishing.

How timber production is benefitted by the existence of wildlife is not always easily recognized, although apparent when one considers the immense numbers of destructive tree insects annually devoured by birds; that pollen is carried from flower to flower by bees and birds, aiding fertilization, and resulting in a larger crop of nuts and seeds; that germination of certain tree seeds is largely dependent on passage of those seeds through the digestive organs of birds; so many trees of today owe their existence to nuts planted by rodents, especially squirrels.

Squirrels occasionally are condemned by foresters for carrying off acorns or hickory nuts, under the mistaken impression that reproduction of the forest suffers. As a matter of fact, these little creatures are but following one of nature's methods of reforestation. They do carry away almost unbelievable quantities of nuts, presumably for winter use, and in this connection it is interesting to note that they select the best, not those infested with worms. A few of these nuts are carried to their nests for immediate consumption, but by far the largest proportion remain buried in the ground.

Instead of condemning the gray and fox squirrels or the chipmunk, they should be

commended for the good work they do in reforestation. They are nature's little foresters, materially aiding in the ultimate production of timber. They never store quantities of food in any one place, instead, they bury the nuts singly an inch or so in the ground, scattering them promiscuously over rather large areas. Some of the nuts stored in single caches are later recovered for food, but it is definitely known that a large proportion remains untouched in the ground. Having been so carefully planted a goodly proportion can be expected to germinate, and at least some of the nuts ultimately produce trees. It is safe to assume that a larger percentage germinates when so planted than would have germinated had they remained where they fell under the parent tree. The red squirrel, on the contrary, stores his food in a large cache, so although he is considered to be of little economic value and is not protected he really has some value in conservation circles. He is credited with being the sentinel who sounds the alarm to the other



The deer problem must be met by game administrators and foresters alike.

inhabitants of the woods on the approach of an enemy.

Certain forms of wildlife plan an important part in the control of fungus diseases very destructive to forest trees. Of particular interest in this connection is a recent report of J. I. Mielke, of the U. S. Forest Service to the effect that squirrels, chipmunks and other small rodents appear to be unwitting allies of man in his fight against the white pine blister rust. The rust, a fungus, is the most destructive known disease of that exceptionally valuable timber tree, the white pine, for which Pennsylvania was once famous, and millions of white pine seedlings have been planted in Pennsylvania as well as other states for reforestation purposes. Mr. Mielke reports that he has observed these animals eating the fungus-caused blisters from the twigs of afflicted trees.

Sportsmen, of course, are more directly

concerned with game and fish, but are likewise much interested in fur-bearing animals as well as all other forms of wildlife. Most American foresters, not so many years ago, were interested almost exclusively in the production of timber, but now a large proportion of them realize that forest game and fish are decidedly valuable natural resources. In Pennsylvania alone the value of the annual crop of game and fur taken from the thirteen million acres of forest territory has been conservatively placed at about \$4,000,000,000; something not to be overlooked. But that is only part of it. Other forms of wildlife have a value beyond ordinary conception, which cannot be estimated in dollars, and many of them play an important part in timber production.

It is now recognized that in any plan of management designed for the production of timber, wildlife must be given its full and just consideration. The forester cannot avoid his responsibilities to the public, a responsibility placed on his shoulders by nature herself. She purposely, not by accident, placed certain species of mammals, birds, fish, reptiles and insects in the forest, decreeing them to be a part thereof, their natural home, molding and fitting them to live and thrive under environmental conditions which she purposely provided within forested areas.

Foresters generally advocate the use of forests for recreational purposes. In this connection, we cannot overlook the fact that wildlife is a magnet which attracts thousands of visitors, other than hunters and anglers, to forest areas, thereby arousing widespread public interest in forests and forestry. This naturally, is a distinct aid to the forester, a fact which he cannot afford to overlook. A forest without an abundance of wildlife is to a great many persons a dull, uninteresting, desolate place.

Timber production should, of course, be of first importance in forest management, and the protection of watersheds should not be overlooked. Nevertheless, game, fur and fish production on a given area should be just as great as the quantity of food and cover will permit without too much injury to timber production. State Game Lands, since they are acquired from funds made available solely from the sale of hunting licenses, should be managed primarily to produce a maximum crop of wildlife. Timber production may logically be materially curtailed to bring about maximum food and cover possibilities; in other words, to establish the best possible environmental conditions for wildlife. But on State Forests, acquired from general State revenues, that is funds in reality belonging to the public at large, management should be such as to produce the greatest good for the greatest number.

If the theory advanced by a few sportsmen that game conditions would be improved as a result of forest fires was accepted as a fact, a most undesirable conflict would arise between forest management and the man-

(Continued on next page)



agement of wildlife resources. Such a condition of affairs could not help but result in untold disaster to both forest and wildlife interests. The theory was advanced mainly by hunters primarily interested in deer and, fortunately, has never become widespread. It is admitted that for a year or so following a forest fire succulent sprout growth supplies good deer browse, but this slight benefit is only temporary, and eventually fires would destroy deer browse as well as the prospects of a timber crop. Such a short-sighted policy could result only in disaster to both. Likewise, this distinctly selfish policy would be disastrous to small game species such as rabbits, ruffed grouse, turkeys, squirrels, etc. as well as to streams and fishing.

Selfishness cannot be countenanced in game management, nor in forest management. Both interests must work in harmony, one with the other, each prepared sympathetically to consider the other's wishes, and to be guided in their decisions by practical and economically important dictates governing each. In this connection, it should readily be admitted that timber is of greater economic importance to the people at large than is game, but, too, that game is entitled to its rightful place in, and as a part of the forest. However, there is ample evidence that the tide is turning, since it is evident that by far the larger proportion of professional foresters now recognize they must plan for a game crop, just as they must plan for a timber crop.

Only within the last few years have American foresters, meaning foresters as a group and not individuals, given much thought to the value of woodland wildlife in general, and game in particular, and even now many have not become thoroughly game conscious. They must do so sooner or later or lose their standing in the forestry profession. Years of concerted effort was required on the part of a comparatively few foresters and wildlife enthusiasts to instill in the minds of the average forester that a direct and valuable relationship existed between wildlife and the forest.

A clear cut indication of the changing attitude of foresters is that a Division of Wildlife Management has recently been set up in the United States Forest Service. Dr. Homer L. Shantz, President of the University of Arizona, has been appointed as Chief of the Division. The Forest Service controls millions of acres of federally owned land, much of which is potential game territory, throughout the United States and its possessions. Inestimable quantities of game can be produced on such huge areas when placed under even reasonably intensive management.

It is of special interest to note that when President Roosevelt recently sent out a call for the North American Wildlife Conference, he appointed the Chief Forester of the United States, F. A. Silcox, to head the committee on arrangements. This in itself is a healthy indication that wildlife is no longer an orphan child, but is now considered a true and lawful member of the forest family.

At a recent meeting of a Forest Research Advisory Council, comprised of foresters from New Jersey, Delaware, Maryland, and Pennsylvania, wildlife in forest management

was considered second in importance of more than fifty forest research problems placed before the council for consideration. Over twenty foresters were present. A day or so later, the annual winter meeting of the Allegheny Section of the Society of American Foresters was held in Harrisburg. This section of the society comprises the States of Delaware, Maryland, New Jersey, Virginia, West Virginia, and Pennsylvania. About 135 foresters attended the two days sessions. It is worthy of note that wildlife, game and fish species in particular, came up for discussion in connection with many of the papers read. These two meetings indicated clearly the changing attitude of the forestry profession.

Just recently an article entitled "The Enlistment of Club Cooperation" appeared in the *Service Letter* of the Pennsylvania Department of Forests and Waters, written by District Forester E. F. Brouse. He raises the pertinent question as to whether or not "sportsmen's clubs in Pennsylvania actively engaged in any kind of a definite forestry program are comparatively few? Whether there is a trend away from forestry, lack of initiative on the part of the clubs, or an indifference on the part of the foresters...." He calls attention to the fact that forestry now needs the help of sportsmen's clubs just as much as during the past half a century, and intimates that Pennsylvania foresters have not been taking advantage of their opportunities to work with sportsmen's clubs.

It is a matter of common knowledge that the forestry movement in this State was from its birth given energetic support by sportsmen, individually and collectively. Their help could always be relied upon to support legislation intended to further the movement and to make the people of the State forest-minded. Many Forest, Fish and Game Clubs were formed and worked tirelessly to place the State in front ranks. But, during the past few years, even though there has been a great increase in the number and membership in sportsmen's clubs, there is an apparent decrease in the number carrying a forestry designation.

This need not necessarily be interpreted to mean that sportsmen's clubs in this State have entirely lost interest in the forestry movement, for as a matter of fact practically all of the larger clubs have a forestry committee. However, it seems quite likely that these committees are not functioning as actively as they did in past years, and if the committees are inactive there is, unfortunately, an apparent lack of interest in the club as a whole. The question naturally arises as to why there should now be a lack of interest. The answer may be that sportsmen feel their aid is no longer needed, or perhaps they are too busily occupied in strictly game and fish pursuits.

Since foresters are becoming wildlife conscious the tide is turning, and it now behooves both interests to work together. Sportsmen should again get into harness and exert every effort to further a constructive forestry program. Likewise, Pennsylvania Foresters should as a whole let sportsmen know that they realize fully their obligation towards fostering a forest game crop as well as a timber crop, and in this connection plan for an adequate amount of food and cover,

without which a game crop can not exist. The carrying capacity of the forest for game is directly dependent on the quantity and even distribution of food and cover.

## FROM A SUBSCRIBER

Having just finished the last issue of PENNSYLVANIA GAME NEWS and being imbued with that neighborly feeling it always gives me, I have gotten up enough nerve to poke out a few lines to you.

"I noticed in yesterday's paper that an eminent columnist said that today's editorial pages are so full of bought canned goods in the form of syndicated articles by doctors, lawyers, and senators that there is little room for native eggplants, carrots, rutabagas, 'taters, green squash, and collards. How true this is of the current variety of sporting magazines. Of course I realize they are written for National circulation, but the point that I am trying to bring out is, what interests a California sportsman has little bearing on what is going on in the interests of Pennsylvania sportsmen. PENNSYLVANIA GAME NEWS gives to Pennsylvania sportsmen first hand information on new game laws, latest dope on conservation activities, and news items of timely interest.

"I have had the good fortune to have traveled a bit and am more or less familiar with game and conservation efforts in other states. I had quail on toast, in the summer time, down in old Mexico, where there is little or no game laws, mountain trout from the snow fed streams of Utah and Colorado, and have watched jack rabbits as large as dogs on the western plains, but there still is no place for me like our own mountains.

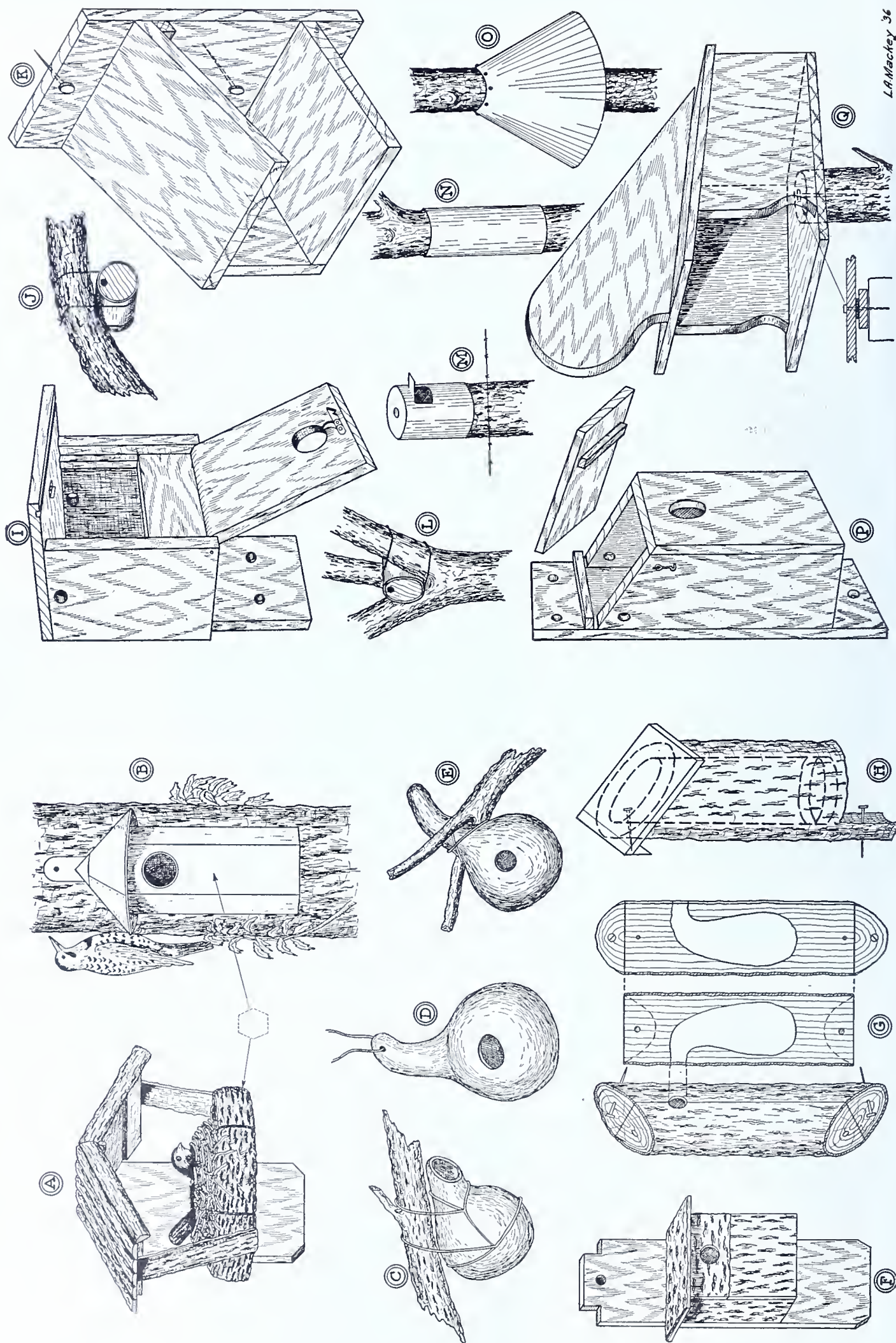
"I am acquainted with a few of your protectors in the Coudersport area, a fine bunch of boys, full of fun, and a credit to the Commonwealth of Pennsylvania. There is the one who seems to have the faculty of knowing where trouble is and being there, the same one whose curiosity landed him at the bottom of a well when he was a baby. His mother's frantic screams brought Art Logue dashing up on his horse, or tricycle, or something. He did a "Tom Mix" into the well and came up with George Cross. (He still can't figure whether he should have brought him up or not). There is also the one who has a penchant for knocking half-fax out of the center of a bull at various distances. He and a Scotchman, noted for his many and varied stories, took the wrong road one night after a pistol match in Bradford, Pa., and while wandering around, caught some pot shooters red handed with a deer, enriching the coffers of Pennsylvania by some couple hundred dollars.

"In the last couple issues you seem to be rather hot and bothered about the game reports attached to each hunting license, and I think you would get a more accurate count of the season's kill if you could compel each sportsman, on applying for his new license, to fill out a form listing his last year's kill, before he could get his new license, and leave the form at the place where he procured his license. Wouldn't this be a more accurate system than the present one?—Art L. Dininny, Bradford, Pa.



# HINTS FOR BUILDING BIRD HOUSES

A. This type of hexagonal nest box will often be chosen by Mother Robin. B. Another hexagonal box which will often attract Flickers. C., D., and E. Gourds make excellent houses for Wrens, Bluebirds, Chickadees, Nuthatches, etc., depending upon size and type of hole and where placed. F. Can be used for Bluebirds and Wrens alike, depending upon size of entrance. G. and H. are excellent Woodpecker homes. I. and P. show accessible nest boxes which are always preferable because they can be cleaned from year to year. This type will attract Bluebirds, Wrens, Flickers and other species, depending upon the size of hole and depth of box. A Woodpecker should be of considerable depth, say 12" to 15". J. L. and M. Tin cans often can be converted into homes for Jenny Wren. K. is shelter or nest shelf for Robins. N. and O. Galvanized or other metal guards prevent cats from reaching nests. Q. Weather-vane feeding shelters.





# Commission Opens New Training School

By W. C. Shaffer

## All Future Vacancies Will Be Filled by Specially Trained Officers

The Pennsylvania Game Commission has developed a very efficient field staff, composed of men who are vitally interested in wildlife restoration. Apparently nowhere else are the game laws better observed, or general wildlife administrative activities better conducted.

However as the work of the Commission has expanded and the number of hunters has doubled, the problems of game administration have become increasingly complex, and, accordingly, the need for taking up the slack between the time new employes are added and they develop into efficient, experienced workers has become more and more evident.

The former examination system for selecting regularly employed field personnel was, in itself, a decided advance over the methods ordinarily in vogue, but has not proved entirely satisfactory. Due to lack of advanced, specialized, and intensive training, the administrative costs, in relation to the results obtained, have been excessive. The need for a new and more efficient method of handling the entire problem has become obvious.

After months of detailed study, based upon the benefits derived from the training school for salaried field personnel during the past four years, the Commission, with the approval of the Governor, has decided to launch the first permanent training school for student officers in game administration in the United States.

The new method of selecting and training such field officers, briefly outlined below, is designed:

1. To assure fully qualified and trained officers in all branches of the field service.
2. To increase general efficiency in game protection and management throughout the State.
3. To reduce administrative costs below those to be expected when untrained personnel is employed.

With the inauguration of this Game Commission Training School, all other forms of selecting salaried field personnel have been abolished, and in the future all permanent appointments will be made in the manner herein outlined.

When a student class is to be chosen for training, notice of this fact, announcing the number of students to be selected, the general qualifications, final date for acceptance of applications, etc., will be given through the public press, sportsmen's organizations, and other advantageous mediums.

Any male citizen permanently residing within this Commonwealth for a period of two (2) years preceding the date of application, who can meet the age, physical and moral qualifications set forth in this publication, and who is desirous of making game protection and management his vocation, is invited to submit an application in accordance with the requirements below:

Eligible applicants will be divided into

seven (7) districts, coinciding with the districts in which the Commonwealth is divided for administrative purposes, namely:

Division "A"—The counties of: Berks, Bucks, Chester, Danphin, Delaware, Lancaster, Lebanon, Lehigh, Montgomery, Northampton, Philadelphia and York.

Division "B"—The counties of: Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, Susquehanna, Wayne and Wyoming.

Division "C"—The counties of: Bradford, Columbia, Lycoming, Montour, Northumberland, Snyder, Sullivan, Tioga and Union.

Division "D"—The counties of: Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin and Perry.

Division "E"—The counties of: Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, McKean and Potter.

Division "F"—The counties of: Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango and Warren.

Division "G"—The counties of: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland.

Those qualifying in a preliminary manner will be advised of their eligibility to take a competitive written examination to be given at the Commission's headquarters, at Harrisburg, Pa., covering the following subjects: Geography, history, mathematics, spelling and the Game, Fish and Forest laws of Pennsylvania. Oral interviews will also be included. The student class will be chosen from those with the highest average standing, and in such equal numbers as may be required to organize the student class. Classes will be limited each year to the requirements of the Commission to fill existing prospective vacancies.

All applicants, selected by the above competitive examinations, will be given a rigid physical examination by a registered physician appointed by the Board, and will be subject also to moral and character investigation before final selection.

Students selected for training will be "enlisted" for a period of one (1) year, commissioned as Deputy Game Protectors, and

receive specialized training at the Game Commission Training School, situated twenty (20) miles north east of Brookville, Jefferson County, Pa.

Specialized and technical training at the school will cover the subjects briefly outlined below:

I. General Instruction—2 weeks. This instruction will include the history of the Game Commission, its objectives, its organization and administrative set-up.

The physical and industrial geography of the State and its inhabitants will be studied. A generalized course in natural history, including the fundamentals of zoology, botany and other sciences also will be offered.

II. Legal Procedure—4 weeks. This training will include all the specialized legal teachings that are necessary in the performance of the work, together with such practical demonstrations as may be valuable.

III. General Protection—2 weeks. This course is to consist of a thorough working knowledge of all the problems found in the administration of the Game Laws, and in the application of general wildlife conservation methods.

IV. Refuges and Lands—2 weeks. Training in this respect will include detailed instruction on the acquisition, development and management of State Game Lands and Refuges.

V. Propagation and Restocking—2 weeks. A practical study of the modern methods of propagating game birds and game animals, including demonstrations thereof on one of the State Game Farms, also the most successful methods of restocking game.

VI. Game Management—2 weeks. This course of instruction will include the elements of intensive game management, and the application thereof, together with the latest known methods for improving game habitat. Emphasis will be laid upon proper types of game food and cover, winter feeding, predator control methods, etc.

VII. Related Instruction. An intensive course of instruction will be given in matters related to police work and will include self defense methods, the handling of prisoners, etc. The student officers will be kept physically fit at all times.

Specialized training will be intermittent with practical field work at seasonable periods of the year. Student officers will be assigned to various Division Supervisors, and reassigned under the supervision of qualified District Game Protectors for practical application of the principles taught at the school. Rotation of student officers to vari-

(Continued on page 15)



Game Protectors Stand Retreat at Training School.



# CURRENT TOPICS

our staff suffered the loss of their homes and much of their property, but every effort is being made among their fellow employees to assist them in their hour of need.

## OUR DEEPEST SYMPATHIES TO:

Game Protector Liphart, Allegheny County whose Father died February 9, 1936.

Frank R. Agnew, Title Abstractor, Bureau of Refuges and Lands, whose Wife died, February 22, 1936.

John A. Hopkins, Game Refuge Keeper, Warren County, in the loss of his Mother, February 4, 1936.

The entire Department mourns the passing away of Deputy E. F. Dougherty on March 2. Mr. Dougherty was a splendid deputy and will be greatly missed in Delaware County.

## CONVALESCING

We are glad to learn that Game Protector Philip Melching of Lebanon County and Merrill D. Swartzfager, Deputy Game Protector, Venango County are improving nicely. They were injured on duty during December. They would like to hear from their brother officers and sportsmen friends.

Our Special Investigators, Baum, Pinkerton, Heffelfinger, Britton and Tom Bell, have made many "Bounty fraud artists," and illegal fur dealer's "pay the penalty" since they have been engaged in this work. Splendid! They are still at it. Give them a hand if they call on you.

## DIVISION GAME SUPERVISORS IN HARRISBURG FOR CONFERENCE



Front row, left to right: Rollin Heffelfinger, Division "G", M. E. Sherman, Division "E", J. B. Ross, Division "C", H. T. Englert, Division "F". Second row: left to right: W. J. Davis, Division "D", F. A. Myers, Division "A", W. C. Shaffer, Director of Protection, W. M. Cramer, Supt. of Training School, and J. C. Gilford, Division "B".



**JUDD TURNER**

Mr. Turner, Deputy Secretary of the Game Commission, is highly esteemed both by his associates in the department and the Sportsmen. He was President of the Northwest Division, Pennsylvania Federation of Sportsmen's Clubs and held important business and civil administrative posts prior to coming to Harrisburg.

## GAME OFFICIALS AID IN FLOOD RELIEF

Field officers of the Game Commission throughout the entire state have been receiving plaudits of local officials in flood stricken areas for the splendid assistance they rendered, and are still rendering in this great emergency, and the Board is proud of the manner in which its employees responded.

They participated in every type of relief activity, including rescue work, traffic duty, police details, message dispatchers, liaison officers, food dispensers, etc.

The office also contributed its share through the personnel of the Division of Education and Mr. Gilson Davis, storeroom clerk. This Bureau commandeered a truck and was on duty with the American Legion and Red Cross on rescue and other details from Wednesday night until Saturday morning.

Many sportsmen's organizations also contributed nobly to the cause, both in man power and money. A note from the Pioneer Fish and Game Protective Association of Allentown, which just reached the Editor prior to going to press, states that their club unanimously voted a contribution of \$10.00 for the American Red Cross.

It would take too much time and space to recount here the splendid acts performed by the personnel of this department and the sportsmen generally. Nevertheless, we feel that it is only just and fair that their response during such a terrible catastrophe be given honorable mention.

It is unfortunate that certain members of

## PROSECUTIONS

Field officers cleared up 271 prosecutions in January, mostly unsettled deer cases. There were also numerous illegal trapping cases. Penalties deposited, February, 1936, \$7903.19.

## GAME COMMISSION ANNOUNCES REORGANIZATION

**Transfers of Field Officers will benefit entire State**

The Board announced on April 3d, with the approval of the Governor, the reassignment of its seven Division Game Supervisors, and the transfer of a number of other field officers as a part of the general reorganization of its field force.

Heretofore too few of the field officers have had sufficient state-wide experience to fit them for higher supervisory positions, and by transferring the Division Supervisors improved administration will be assured in all of the seven major regions. All of the Supervisors will be fully capable to cope with any sectional problems unlike those found in the division to which they were heretofore assigned.

The Commission has felt for some time that the appointment of Assistant District Game Protectors in some of the counties is not the most economical and efficient system. All of these positions have been abolished and the appointees reclassified as Travelling Game Protectors, now becoming "Flying Squadrons" working under the direct control of the Division Supervisors. Heretofore many of the Divisions have not had an



equalized or sufficiently mobile unit of trained officers available to cope with local problems that arise from time to time. By transferring a portion of the Travelling Game Protectors this improvement has been accomplished.

The general reorganization plan in conjunction with the Training School, will improve game protection throughout the State.

All transfers become effective at once. The Division Supervisors and their reassignments are as follows:

W. M. Cramer, West Lawn, former supervisor of Division "A," assigned as Superintendent of the Training School in Jefferson County.

F. A. Myers, Shippensburg, Division "D" to Division "A," with headquarters near Reading.

W. J. Davis, Williamsport, Division "C" to Division "D," with headquarters at Huntingdon.

J. B. Ross, Greensburg, temporarily in charge of Division "G" transferred to Division "C," with headquarters at Williamsport.

H. T. Englert, Coudersport, Division "E" to Division "F," with headquarters at Franklin.

J. C. Gilford, Oil City, Division "F" to Division "B," with headquarters at Wilkes-Barre.

M. E. Sherman, Chinchilla, Division "B" to Division "E," with headquarters at Emporium.

Rollin Heffelfinger, former District Game Protector, Honesdale, Wayne County, has been promoted as a Supervisor and assigned to Division "G," with headquarters near Pittsburgh.

### Reclassifications and Assignments

The following officers have been reclassified and reassigned as indicated.

R. D. Reed, Reading, former Acting Game Protector, Berks County, as Assistant Superintendent of the Training School.

M. J. Golden, Jessup, Pa., reclassified as Travelling Game Protector and assigned temporarily as Acting Game Protector, Berks County, with headquarters at Reading.

G. C. Hubier, reclassified as Travelling Game Protector and transferred from Gordon to Tamaqua.

M. R. Miller, reclassified as Travelling Game Protector and transferred to Hawley from Damascus. Mr. Miller will be temporarily in charge of Wayne County.

T. T. Schafer, reclassified as Travelling Game Protector and relocated at Gouldsboro from Paupack.

W. W. Ohlman, White Haven, reclassified as Travelling Game Protector and to be located at White Haven.

M. L. Hagenbuch, Jersey Shore, reassigned as Travelling Game Protector to Shamokin.

Leroy Gleason, Williamsport, reclassified as Travelling Game Protector and transferred to Jersey Shore.

C. F. Walker, Assistant District Game Protector, Beavertown, reclassified as District Game Protector in charge of Snyder County.

S. H. Price, Assistant District Game Protector, promoted to District Game Protector, Huntingdon County, with headquarters at Shade Gap.

Isaac Baumgardner, Game Refuge Keeper, White Pine, reclassified as Travelling Game Protector, with headquarters at Mt. Union, Huntingdon County.

Herman Fisher, Travelling Game Protector, Reedsville, will remain as Acting Game Protector, Perry County, finally taking over the duties of a Travelling Game Protector, with headquarters at Mifflintown.

G. D. Bretz, Bolling Springs, reclassified as Travelling Game Protector and relocated at Shippensburg.

W. G. Lane, Game Refuge Keeper, Huntingdon County, reclassified as Travelling Game Protector and relocated at McConnellsburg.

W. D. Denton, Madera, Assistant District Game Protector, reclassified as Travelling Game Protector and relocated at Philipshurg.

W. D. Foote, Roulette, Assistant District Game Protector, reclassified as Travelling Game Protector and relocated at Port Allegany.

A. C. Besecker, Mt. Pocono, Assistant District Game Protector, reclassified as Travelling Game Protector and relocated at Charleroi, Washington County.

### Reclassifications Only

Following are reclassifications from Assistant Game Protectorship to Travelling Game Protectors, without change of headquarters:

B. C. Case, Troy  
O. M. Pinkerton, Muncy  
F. E. Couze, DuBois  
G. W. Keppler, Titusville  
H. J. Updegraff, Shipperville

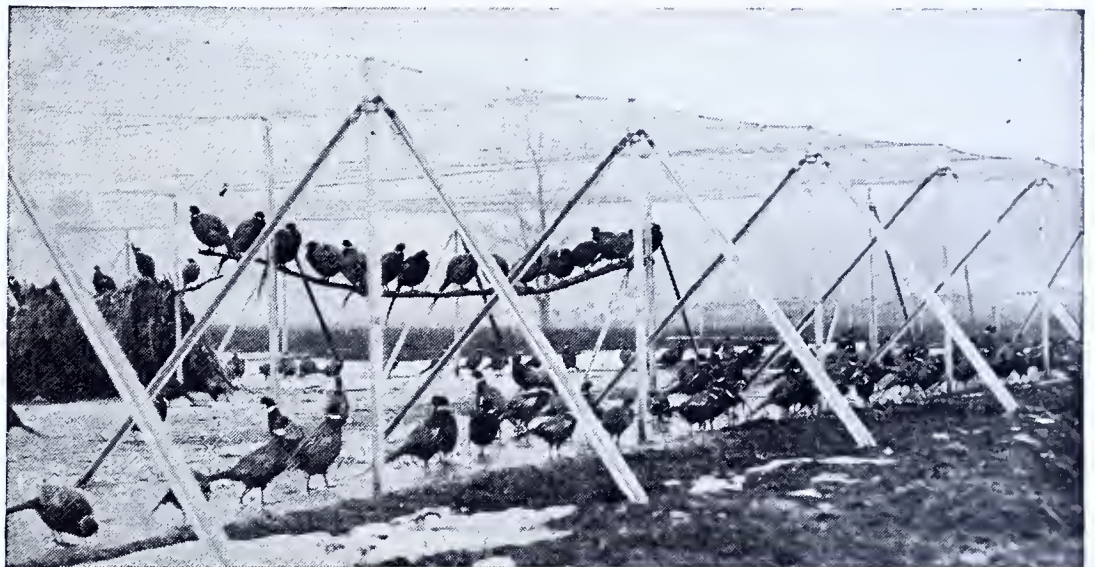
### Relocations

The following Travelling Game Protectors have been transferred to the locations given below:

B. J. Davis, Renovo, to Elizabethtown, Lancaster County  
S. B. Reed, St. Mary's to Johnsonburg, Elk County  
G. L. Norris, Butler to Grove City, Mercer County  
W. B. McClarin, Ebensburg to Cherry Tree, Indiana County.



Part of the 6700 Cock Ringneck Pheasants which are being shipped from State Game Farms for liberation this spring.



Only the best quality birds are being restocked this season. The Board's new policy will be based on quality rather than quantity production.

### 6700 RINGNECKS RELEASED

The liberation throughout the State of many increased thousands of full-grown, Ringneck cock pheasants by the Pennsylvania Board of Game Commissioners marks the beginning of a new game propagation policy, looking toward maximum reproduction in the wild of pheasants liberated from the State Game Farms.

Upwards of 6700 cock birds, all splendid specimens of the Ringneck pheasant, are being shipped from the State Game Farms for liberation by District Game Protectors through the Commonwealth. These male birds are being released to establish a better mating balance with the many hens now in the wild, and represent a vast increase over the number liberated last year.

Due to the Commission's new policy of holding matured birds over the winter at the farms for Spring liberation, tremendous losses from severe winter weather and destructive floods were avoided. Thousands of birds were wintered at the farms this year with less than normal loss.

It is reported that many of the leading sportsmen's associations, particularly those in the heavily hunted pheasant counties, have expressed approval of the Commission's new policy. Many of them predict that in spite of the past disastrous winter, this policy will result in a considerable increase in the number of pheasants.

### STATE GAME BIRDS TAKE PRIZES AT SPORTSMEN'S SHOW

The Fish and Game Commissions jointly displayed a very attractive exhibit at the Sportsmen's Motor Boat Show in Philadelphia, at which over one hundred thousand persons were present.

The Pennsylvania Game Commission displayed five different species of game birds at the annual Game Bird Show held in conjunction with the Sportsmen's Motor Boat Show in Philadelphia last month, including ringnecked pheasants, bobwhite quails, California Valley quails, Hungarian partridges, and Mongolian pheasants. The Pennsylvania ringnecks and bobwhites took special prizes for being the best in the show. Missouri took first place for displaying the best Mongolians. Over one hundred and fifty birds were exhibited.

The judges of the special classes were Mr. Tom Ray, noted Game Breeder and Game Keeper from New York, and Mr. Clarence N. Keleher, Philadelphia, Pa. Mr. Keleher is the Game Management Expert for the Clark estates of that section. Mr. Ray, who is one of the best known game breeders in America, is at present the Game Superintendent for the Robert Gray Estate in New York. Mr. Charles W. Wessell, Chief of the Division of Propagation and Game Farms of Pennsylvania Game Commission, helped judge the various other classes.



MINK

EASY RUN

RUN

JUMP

### CONTROL THE CROW

**R**IGHT now is the time to help reduce the crow population.

These black marauders, when present in large numbers, are a serious menace to small game, particularly game birds, whose nests, eggs, and young they destroy whenever they find them. They also destroy the nests of young rabbits and levy a heavy toll on the farmers' chicks in the spring.

In the Southern counties crows are abundant the year round and during the winter the birds congregate in great flocks at favorite roosts; these are the places at which sportsmen should concentrate in an effort to thin out their numbers.

Crow campaigns as instituted by some sportsmen's associations are to be encouraged when properly regulated. A practical way of carrying on such a campaign is to establish contests wherein two or more teams compete in friendly rivalry. Contests of this sort offer the finest kind of sport and some organizations open the contests to their farmer friends to bring about the friendly relation between these two groups which is so highly desirable.

Many worthwhile prizes are awarded in a competition of this sort, most of them donated by local sporting goods dealers and other merchants. A popular system now in vogue among certain sportsmen's groups is to solicit local merchants for prizes and then capture, band and release a like number of crows, the individual killing of such a banded bird being awarded the prize indicated on the band to which it applies.

This interest on the part of sportsmen to curb the crow is looked upon with great favor by landowners and is going a long way toward cementing friendship between the sportsman and farmer.

The Ellwood Rod and Gun Club, Ellwood City, recently inaugurated an eight-month campaign to eliminate crows and other predators. The first half of the contest began February 1 and ends May 1, and the second half begins June 1 and ends September 1. This organization is releasing a great many banded crows and any person killing one is given a cash reward of \$1.00. Shotgun shells are also awarded for the killing of unprotected hawks and owls, stray house cats, foxes and weasels.

In some states, especially prepared bombs are planted or dropped at roosts from airplanes and in this manner thousands of crows are humanely killed.

The Everett Chapter of the Izaak Walton League of America also conducted a crow shooting contest recently. They got local merchants and business men interested and as a result secured 34 prizes ranging anywhere from sporting goods and groceries to car

parts. To further stimulate interest the members caught and banded 34 crows, applying a prize to each crow killed. Three were killed during the contest, the prizes awarded being a .22 rifle, \$5.00 in cash and \$5.00 in trade. Two teams were chosen and they went at it nip and tuck, but when the contest was over everybody was so mixed up on the count that they called it a draw. 208 crows were killed.

The Chapter plans to put on another contest this spring when some more worthwhile prizes will be added.

Crows are the greatest menace to wildlife when they are rearing their young, and sportsmen's associations are urged to extend their campaigns throughout the spring and summer months and to kill as many young crows in their nests as possible.

### WOULD PROTECT FUR-BEARERS

The Marten, Fisher, Wolverine and Otter, North America's four most valuable fur animals from the standpoint of the individual pelts, are in a precarious status, according to a recent announcement by Ira N. Gabrielson, Chief of the Biological Survey, who advocates a closed season on these animals for a period of at least five years in order to increase the breeding stock.

The Shawnee Conservation Association and the Roaring Spring School Board jointly constructed a skeet layout and trap and rifle range on the athletic field of the aforementioned school. They also established an indoor rifle range in the basement of their New Community Building.



Above are sportsmen who helped eliminate a lot of stray dogs which were chasing deer last winter. Standing, left to right: C. E. Mengel and Dr. D. J. Ganey of Bethlehem; M. D. Parsons and A. L. Bachman of Hellertown. Kneeling: H. G. C. Hoffert, J. R. Bachman of Hellertown and R. C. Weaver of Bethlehem with some of the deer killed by dogs. The eighth member was J. P. Young of Bethlehem who took the photo.

### TIE UP YOUR DOGS

Stray, half-wild dogs, as well as those left to run at large by irresponsible owners, are a serious menace to deer and other wildlife, and every effort should be made to remove the stray animals and to capture and tie up the others.

During the past few weeks hundreds of deer were killed by half-starved canines. Photographs of some of these tragedies appear elsewhere in this issue. Sportsmen's

associations and others interested are urged to cooperate with state agencies in an effort to put a stop to their depredations.

It is fully as important to keep dogs tied up at this time of the year as it is during the nesting and breeding season for game. Deer, rabbits and other creatures, weakened and emaciated by the severe winter, are unable to escape when pursued by dogs made increasingly bold and ferocious by the pangs of hunger.

OTTER

WALK

RUN

JUMP



## A TRIBUTE TO A DOG

BY THE EDITOR

Those of us who are field trial enthusiasts mourn the loss of a great favorite—"Marietta Joe," owned by Dr. E. K. Tingley of Marietta, Pa.

The Doctor, in writing me soon after the famous pointer died said:

"Joe's loss to me is like the loss of a dear friend or one of the family. I may have other good dogs but I will never have another 'Joe'. He knew me and had a great deal of respect for me and functioned beautifully for me on many occasions. 'Joe' is gone but I have many beautiful trophies and an oil painting of him, and his memory will always be with me.

"He was bred by Mr. G. A. Coffey, Lathonia, Georgia, and his outstanding blood lines were Ch. 'Comanche Frank' through Ch. 'John Protector', Ch. 'Tom Doone' and Ch. 'Manitoba Rap'. He was a great young dog and when seventeen months old he had been placed four times in field trials; once in an all-age stake, and had won on the bench five points toward his championship. At Medford a few weeks later I refused two offers for a thousand dollars and one for fifteen hundred dollars for this good young pointer. I was asked if I would accept twenty-five hundred dollars but stated he was not for sale at any price. I had bought 'Joe' for one hundred dollars from Mr. Raymond Hoagland of Rumson Farm Kennels. He owned 'Joe's' sire, Ch. 'Dapple Joe'. 'Joe' had a rather checkered career from his derby year on, having fallen into the hands of a trainer who had other dogs further along and he gave very little attention to 'Joe'. He nearly died in the south from hook worm infestation, and every time he was sent away from home, with but one exception, he came back looking ready for dog heaven. Each time I brought him back to good health and succeeded in winning many places with him in Amateur Field Trials. When he was good he was almost unbeatable, but he was high strung and apt to err, and when he would err it was anybody's dog race but 'Joe' was out—he would misbehave and act more like a puppy than a trained dog."

## NATIONAL WALTONIAN CONVENTION

April 16, 17 and 18 are the dates for the National Convention of the Izaak Walton League of America, Inc., to be held in the Hotel Sherman, Chicago. Highlights of the meeting will include discussion of means of controlling stream pollution, with particular emphasis on the water pollution bill introduced in Congress by Senator Augustine Lonergan of Connecticut, on February 7. Incidentally, this bill was prepared by Grover Ladner of Pennsylvania.

The livestock versus game interests on the public domain lands of the West also will be discussed, as well as ways to aid the new Wildlife Federation inaugurated at the Wildlife Conference in Washington.

There is a great deal more to be said about "Marietta Joe", his campaigns and his trophies, but we do not have space, unfortunately, to recount them.

## FROM THE FIELD

Game Protector Bruce Yeager of Northumberland County outlined in a recent talk some interesting notes on the game feeding done in that section: 14,770 lbs. of ear corn and 9900 lbs. of scratch grain were purchased at a cost of \$288.00. The cost of distributing it amounted to \$500.00. The game fed, carefully checked as to numbers at the various feeders, included 2370 ringnecks, 1123 Hungarian partridges and 340 bobwhite quail. Hundreds of squirrels and rabbits also were fed. The cost of the game birds thus saved, should the Game Commission have had to replace them is as follows: 2370 ringnecks, \$7100.00; 1123 Hungarian partridges, \$5615.00; and 340 bobwhites, \$680.00, a total of \$13,450.00.

Game Refuge Keeper, Elmer Pilling, stated the following:

I have just located 56 deer, 50 grouse and many squirrels in Big-fill Hollow on an area of about 25 acres.



The above photo of Bucks with antlers locked, submitted by George W. Cross.

## WATERFOWL CONDITIONS IN CANADA

Waterfowl breeding conditions throughout Canada in 1935 were better than they were during the previous six years, according to Hoyes Lloyd, Supervisor of Wild Life Protection, National Parks of Canada.

John B. Yellig of Pittsburgh killed a buck which had two antlers on the left side. Mr. Yellig, by the way, is a real old-timer. He is 74 years old and was author and sponsor of a bill which was enacted back in 1903 licensing unnaturalized foreign-born residents \$15.00 for the privilege of hunting.

Raymond Price of Cresco owns a dog that caught a wildcat and killed it.

Refuge Keeper Hugh Baker of Tioga County on his weekly report states: "E. N. Jenks, Ansonia, reports that eight grouse have come to a spring near his home nearly every day this winter to eat watercress."

## Summary Sheet of Bounty Claims Allowed On Noxious Animals During the Month of February, 1936

Counties	Wild Cats	Gray Foxes	Gos- haws	Weasels	Amounts
Adams	0	17	0	161	\$ 229.00
Allegheny	0	4	0	74	90.00
Armstrong	0	21	0	273	357.00
Beaver	0	0	0	43	48.00
Bedford	0	46	0	201	385.00
Berks	0	28	0	475	587.00
Blair	0	5	0	144	164.00
Bradford	0	33	0	330	462.00
Bucks	0	34	0	423	559.00
Butler	0	20	0	267	347.00
Cambria	1	27	0	266	389.00
Cameron	1	20	0	8	103.00
Carbon	0	11	0	67	111.00
Centre	1	28	0	117	244.00
Chester	0	8	0	362	394.00
Clarion	0	9	0	215	251.00
Clearfield	0	41	0	336	500.00
Clinton	1	34	0	35	186.00
Columbia	0	20	0	216	296.00
Crawford	0	6	0	549	578.00
Cumberland	0	7	0	134	162.00
Dauphin	0	15	0	146	206.00
Delaware	0	1	0	95	99.00
Elk	0	13	0	90	142.00
Erie	0	0	0	368	368.00
Fayette	2	51	0	283	517.00
Forest	0	1	0	119	123.00
Franklin	0	20	0	148	228.00
Fulton	2	16	0	52	146.00
Greene	0	11	0	43	87.00
Huntingdon	1	42	3	161	359.00
Indiana	0	22	0	330	418.00
Jefferson	0	15	0	177	237.00
Juniata	0	12	0	71	119.00
Lackawanna	0	11	0	92	136.00
Lancaster	0	22	1	446	539.00
Lawrence	0	0	0	76	76.00
Lebanon	0	5	0	93	113.00
Lehigh	0	5	0	121	141.00
Luzerne	1	36	1	326	490.00
Lycoming	0	68	0	112	384.00
McKean	0	7	1	91	124.00
Mercer	0	2	0	201	209.00
Mifflin	0	18	0	58	130.00
Monroe	0	20	3	187	282.00
Montgomery	0	11	0	340	384.00
Montour	0	1	0	72	76.00
Northampton	0	4	0	170	186.00
Northumberland	0	18	0	182	254.00
Perry	0	28	1	123	240.00
Philadelphia	0	6	0	31	55.00
Pike	2	35	2	74	254.00
Potter	0	6	1	18	47.00
Schuylkill	0	51	0	374	578.00
Snyder	0	7	0	66	94.00
Somerset	0	38	0	363	515.00
Sullivan	0	16	1	65	134.00
Susquehanna	0	50	0	160	360.00
Tioga	1	23	0	113	220.00
Union	0	15	0	31	91.00
Venango	0	6	1	182	211.00
Warren	0	2	0	140	148.00
Washington	0	7	0	108	136.00
Wayne	0	48	1	62	259.00
Westmoreland	2	16	0	474	568.00
Wyoming	1	31	0	166	305.00
York	0	24	0	450	546.00
TOTALS	16	1,275	16	12,346	\$17,766.00
Total number of claims	5,542				

The annual stag banquet of the Allegheny County Sportsmen's League will be held in the ballroom of the William Penn Hotel, Thursday, April 20, the principal speaker being J. N. (Ding) Darling.

## BOY SCOUTS WILL LEARN TO SHOOT

Experienced marksmen have volunteered to teach Boy Scouts, Girl Scouts and Camp-Fire Girls the art of rifle shooting at their respective camping grounds. A number of the camps have rifle ranges installed. Camp Delmont, near Somnetytown, one of the largest Boy Scout camps in Pennsylvania, has a splendid range. Some of the camps are affiliated with the National Rifle Association.

Many of the gun clubs in the State are installing rifle ranges, the small-bore rifle being used. The sport is quite fascinating and very economic.





Left to right: Upper row—R. F. Bigony, caretaker of Lucillus Hunting Lodge, Potter Co., with tame spike buck. Results of crow shoot of Everett Chapter, I. W. L. A. "Cutie", tame spike buck "kissing" caretaker shown previously. Second row: Feeding committee, Duryea Camp 208, United Sportsmen. Barrel feeder erected by Alfred McCarty, Barree. Boy Scouts of Ebensburg feeding game. Third row: Warren Faust of Weatherly with trophy. Wild turkeys found dead during heavy snows. Dale Arner and James Horn, Weissport, at feeding shelter. Bottom row: Two juvenile game feeders. Deputy Harold R. Jones of Linglestown fed game via old Dobbin and sleigh. Crow trap constructed by Old Town Sportsmen's Association.



Top to Bottom: First row—Lewis D. McBeth, Cranesville, with trophy taken near Sheffield, Warren County. Future sportsmen in the making. Pathway between high rocks in Potter County.

Second Row: Members of Lone Camp, Lycoming County and trophies. Dale Dickenson of Auburn, Indiana, with nice black bear killed in Pennsylvania last season. Leonard Wetzel of Erie, with bear killed near Kellettsville, Forest County, after he trailed it for 8 hours. Watching the large hawk migration on Hawk Mountain, near Dreherstown, Schuylkill Co.

Third Row: Jimmy Brown of Wellsboro with black bear. Members of Troop 78, Halifax Boy Scouts ready for the trail. Large black bear killed by a Canton hunter whose name and address we would like to have.





# The Proposed Federal Control of Stream Pollution Lonerган Bill S-3958

By Grover C. Ladner

Deputy Attorney General of Pennsylvania

This important piece of legislation is the result of the findings of the Secretary of War Dorn-Senator Lonerган conference which was held at Washington December 6, 1934. It was a conference attended by the outstanding experts and leaders of the country on the subject of stream pollution. The complete report of proceedings of the conference is to be found in Senate Document No. 16 of the Seventy-Fourth Congress, and is well worth the perusal of anyone interested in the subject.

The findings of that conference were condensed by the writer in the course of an address to the American Game Conference into the following proposition:

First, that pure water, next to air, is the most absolute necessity of life. Stream pollution abatement is not a mere luxury to be ranked with what might be called comfort improvements such as new roads, bridges, public buildings and the like, but it is so absolute a necessity that to temporize longer with the problem is to court national disaster.

Second, the very worst stream pollution is to be found in the great interstate waterways and their tributaries. Therefore it has ceased to be a mere matter of local interest. It has become a matter of national concern.

Third, that industrial pollution and municipal sewage pollution must be attacked as a single problem and at the same time. Taxpayers will spend no money to clean public streams which industries continue to use as private sewers.

Fourth, that the most effective argument that industrial polluters advance against enforcement of anti-pollution laws by their states is the plea that they should not be put at a competitive disadvantage with industries located in other states that fail to act. While this argument is more plausible than sound, it is very effective with the public. It causes confusion and hesitation, which weakens the drive for strict enforcement in any State.

Fifth, that both municipalities and industries very generally plead lack of funds.

Summarized, these propositions demand a new approach to the problem, and a plan which would meet the following requirements: (a) Provide uniformity of enforcement, bearing down equally on industries as well as municipalities irrespective of location; (b) provide for immediate installation of sewage disposal plants and trade waste treatment works by furnishing funds for both, and (c) provide a watershed pollution control irrespective of state boundaries.

Obviously, these requirements can only be met through the intervention of the Federal Government. If it does intervene, a central authority must be set up or powers conferred upon some existing agency to conduct the following activities:

1 To attempt through state co-operation to obtain uniformity of state laws, procedures and enforcement of water pollution preventive and corrective measures.

2 To assist the proper state agency in the studies necessary to determine the extent of the pollution of any waters within the state, to establish standards of purity of these waters and to determine the necessary corrective measures for attaining these standards.



Photo Courtesy Pennsylvania Angler.

Let us keep our streams pure so that those who come after us may enjoy even better sport than we did.

3 To direct that studies be made by existing agencies of the Federal Government qualified to make such studies of such interstate watersheds as appear necessary, and to finance these studies.

4 To determine from the studies the area of each interstate watershed to be established as a water pollution abatement district, to be known thereafter as the sanitary water district, and to set up for that district standards of purity and minimum requirements as to treatment of polluting material before the same is discharged into the waters thereof.

5 To create for each sanitary water district so established by the National Board a

sanitary water district board to the number to be determined by the National Board, such boards to be given authority to require abatement and prevention of all water pollution within the area of the district, to require installation of such sewage disposal plants and such treatment works for industrial works as may be necessary to cleanse, protect and safeguard the purity of the waters within the district, and to arrange for the necessary financing and construction of the required sewage disposal plants and treatment works of industrial waste by offering Government loans.

In conformity to those findings, there was drafted the Lonerган Bill, Senate Bill 3958, the provisions of which may be summarized as follows:

Section 1 makes the National Resources Committee, now existing under executive order, a permanent establishment, and provides that its membership shall be composed of Secretaries of War, Interior, Treasury, Agriculture, Commerce and Labor, the Federal Emergency Relief Administrator, all serving without additional compensation, and three other members to be appointed by the President, with the consent of the Senate, to receive salary. The term of office of the appointive members is for six years, and provision is made that vacancies shall not all happen at once, but one of the appointive members will be appointed every two years. The chairman of the committee is to be designated by the President.

Section 2 gives this committee power, in addition to the duties prescribed by executive order of June 7, 1935, to appoint and fix compensation of officers and employees, and to make expenditures necessary for carrying out the functions under the act. The committee shall make a full report to Congress at the beginning of each regular session.

Section 3 directs the committee to co-operate with the state stream pollution abatement agencies, with the view of coordinating activities of the several states in this regard to encourage enactment of uniform state laws on the subject, to encourage compacts between the several states on the subject and to make studies, surveys and experiments necessary to determine the need for and devise methods for carrying out preventive and corrective methods relating to water pollution in the several states. The committee is authorized to act as a clearing house. The committee is also authorized to collect and disseminate information to make available to state agencies the results of its studies and surveys, to assign experts in its employ to assist and advise state agencies without charge to the states, to make and arrange loans for construction of sewage disposal plants and trade waste treatment works.



Section 4 gives the consent of Congress to any two or more states that enter into agreements or compacts not in conflict with the law of the United States for the prevention and abatement of water pollution.

Section 5 directs the committee, insofar as practical in making its studies and surveys, to make use of information already gained by similar studies.

Section 6 provides for the establishment of sanitary water districts. The committee is directed "as soon as practical" to divide continental United States into districts known as sanitary water districts. These districts are to conform so far as practical to areas of watersheds not wholly contained within the boundaries of one state. The committee is authorized to fix the standards of purity for the waters of each such district and to establish minimum requirements as to treatment of polluting material before it is discharged into the waters and to promulgate regulations concerning such discharges.

Section 7. District Boards. The committee is directed to appoint a district board for each sanitary water district and is authorized to fix the terms of office and the compensation of such members. The committee is compelled to select not less than three-fourths of the members of each district board from the bona fide residents of the district, and to apportion them as nearly equally as possible among the states comprising such district. The duty of the district boards is defined by the act to be:

- (1) To prevent the pollution of waters by voluntary methods insofar as practical.
- (2) To investigate the advisability of making loans or grants for construction of sewage or trade waste treatment works and to make recommendation thereon to the committee.
- (3) To institute proceedings for the pre-

vention and abatement of water pollution in the district.

Section 8. Loans and grants. The National Committee is authorized to make loans or grants, or both, to the states and political subdivisions for sewage disposal plants and also to make loans to persons or corporations for construction, enlargement or improvement of trade waste treatment works. These are subject to the following limitations:

- (1) Loans or grants may be made only upon request or recommendation of the state agency or the district board.
- (2) Grants are not to be made beyond a fixed percentage of the cost of labor and materials employed.

Section 9. Injunction proceedings for the abatement of pollution. Section 9 enables the district board or the National Committee to enforce compliance where voluntary methods fail. This important section recites that, pursuant to the powers of the Federal Government to regulate interstate commerce and navigation, to alter the admiralty and maritime law, to give due effect to the Migratory Bird Treaty and protect the fisheries. Congress declares that the discharge or deposit of any substance, whether solid, gaseous or liquid, into the navigable waters of the United States, or into any stream from which the same may float or be washed into such waters in violation of the regulations of the committee, if such waste or substance is injurious to public health, domestic animals, fowl, fish, shell-fish or other aquatic life, migratory water-fowl or other wild game, or impairs in any manner the utility of such water for navigation purposes, is against the public policy of the United States and a common and a public nuisance. It directs the United States Attorney to bring an action to prevent or abate such nuisance in the name of the United States in the Federal Court, when requested to do so by the Na-

tional Resources Committee or the district board of a sanitary water district.

Section 10 safeguards the right of any person or public body to bring actions for damages which they may now have on account of water pollution.

The outstanding features of this bill are:

- (1) It makes for uniformity.
- (2) It enables the fixing of standards based upon the needs of the particular watershed involved.
- (3) It affords a clearing house for existing state agencies.
- (4) It encourages voluntary co-operation and compliance by such polluters as recognize their public duty, and gives power to compel obedience of such as refuse or neglect their public duty. At the same time, it supplies the long-felt need of enabling the polluter to comply with the decrees by loans and grants in the case of public communities and by loans in the case of private polluters.

As pointed out in a statement of Senator Lonergan when he introduced the bill: "The problem of pollution, as of all conservation work, is not simply a matter of favoring a few hundred sportsmen by saving a few thousand wild ducks, fish or other wildlife, but is a problem of vital interest to our public health." He then quoted from a national health authority, the late Doctor Theobald Smith, to the effect that we must destroy water pollution or it will destroy us.

It is to be hoped that every right thinking citizen, be he industrialist, conservationist or sportsman, will join in the movement of enabling the nation to save itself from destruction.

It will be helpful if all citizens and civic organizations send a letter, endorsing and approving the bill, to their United States Senator and to their Congressman, and send a copy thereof to the Honorable Augustine Lonergan, United States Senator.

## COMMISSION OPENS NEW TRAINING SCHOOL

(Continued from page 7)

ous sections of the State on field assignments will be practiced, so that sectional problems may be studied.

Students, who successfully complete the entire course of school and field training, will be appointed to the various existing vacancies in field service without regard to the county from which they were recruited, and shall be subject to transfer at the discretion of the Board. In the event existing vacancies are insufficient to absorb the entire class of students, the surplus will be employed on a per diem basis, equivalent to the salary of a permanent appointment of the same grade, until a vacancy exists.

The following is a brief outline of the general qualifications and regulations:

1. Residence Requirements—Each applicant shall have been a resident citizen of the Commonwealth of Pennsylvania for a period of not less than two (2) years preceding the date of application.
- (2) Age Requirements—The minimum age, at the time of filing the application, shall be twenty-one (21) years and the maximum age shall be forty (40) years. A Deputy Game Protector's age shall be computed from the date of his commission, provided the service shall have been both continuous and satisfactory. An allowance of two years in excess of the maximum age, for each five (5) years of service shall be granted Deputy Game Protector, provided, however, that the applicant shall not have exceeded the age of forty-five (45) years on the date of appointment to the Training School.

3. Height Requirements—The minimum shall be five feet, eight inches (5'8") taken in stocking feet, the maximum to be in relative body proportions.

4. Weight Requirements—The minimum weight shall be one hundred thirty-five (135) pounds stripped of all clothing. The maximum shall be two hundred (200) pounds stripped of all clothing.

5. Physical Qualifications—Each applicant shall be subject to a rigid physical examination and shall be free from all physical defects, including the shortage or loss of a member of the body. A preliminary physical examination, conducted by a registered physician of this State, shall be made a part of the application, the cost of which shall be borne by the applicant. The final physical examination shall be made by a registered physician, appointed by the Board, or its agent, the cost of which shall be borne by the Board.

6. Examinations—Applicants who have been advised that they are eligible to compete in the written examinations at Harrisburg shall report at the designated place and time. The applicant is personally required to pay all transportation or other costs involved. Illness, unavoidable non-attendance, or tardiness will not be sufficient excuse for participating in a similar examination at a later date, on the basis of the original application.

Examination gradings, or comparable averages, will not be published. Any competitor, or a person authorized by him in writing, shall have access to a review of his examination papers at the offices of the Board at Harrisburg, only, for a period of three (3) months, following the date of examination.

7. Other Qualifications and Requirements—Successful applicants shall be subjected to a rigid moral and character investigation, conducted by a person or persons appointed by the Board or its agent, who shall conduct a full, fair and impartial investigation. The investigator shall certify to the Board a full, true and correct written report of his findings.

8. Rates of Compensation—Students selected for appointment to the Training School shall be paid at the rate of twenty-five dollars (\$25.00) per month, and in addition will receive maintenance and subsistence

during the time they are receiving specialized training at the school; and the sum of sixty dollars (\$60.00) per month, and necessary traveling expenses, during the time they are engaged in field work, with the exception that any student who fails to pass satisfactorily the first thirty (30) days of training shall receive no compensation.

9. School Regulations—Strict discipline will be maintained at the school. Each student will be supplied with the regulations upon matriculation, and any infractions shall be considered sufficient reason for immediate dismissal. Such dismissals will be final.

Any student dismissed or dishonorably discharged shall be barred from future service with the Commission.

10. Leaves of Absences, Etc.—Student officers will be granted reasonable leaves of absence over weekends during the school term and field service. No other leaves will be granted except those of an emergency character. Leaves of absence shall be at the personal expense of the student. The schedule of training will not permit deviation from these regulations.

11. Reporting to School—Student officers will be required to report to the school at their personal expense.

12. Visitors—The school facilities are not adequate to lodge and provide subsistence for relatives and friends of student officers. Therefore, it is necessary to limit the hours of visitation to Saturdays between 10:30 A. M. and 4:30 P. M., and on Sundays, between 9:30 A. M. and 4:00 P. M.

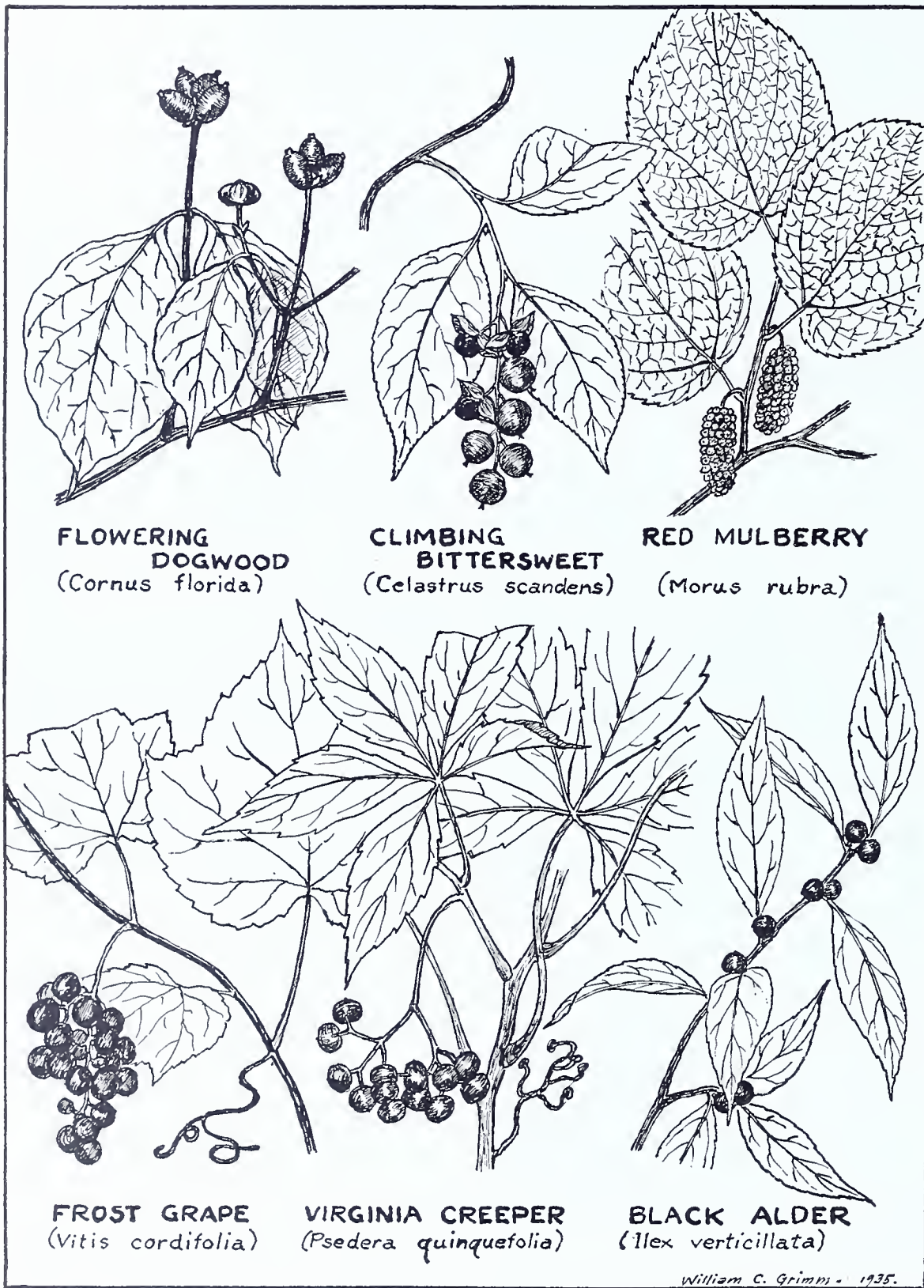
13. Applications—No application will be considered, except those submitted on the official form provided for the purpose, which must contain complete information, sworn or affirmed before a proper public official. Applications can be secured only by addressing a written request to the Board of Game Commissioners, Bureau of Protection, Harrisburg, Pa. Applications, in order to be considered for the next student class, must bear a cancelled post mark not later than midnight, April 10, 1936. The next student class will consist of 35 students.

L30C950



# Planting Food for Wildlife

By William C. Grimm



EDITOR'S NOTE:—This is the third of a series of articles by Mr. Grimm on what, how, when and where to plant food bearing trees and shrubs for game.

**FLOWERING Dogwood.** Small tree with opposite, simple, entire leaves. The flowers are small and greenish surrounded by four large whitish bracts and appear in April or May. In autumn the small clusters of elongate, scarlet, berry-like fruits are distinctive. Seeds do not germinate the first season. They may be gathered in fall, and, after removing the pulp, planted in moist, rich soil. Seed may also be buried in a box of moist sand and planted the spring of the second year.

Cover seed with  $\frac{1}{4}$  inch of soil. Provides food for birds and is an excellent ornamental tree.

**Climbing Bittersweet:** Twining vine. Leaves alternate, pointed, and finely toothed. Fruits in drooping clusters. When mature the outer covering splits and exposes the scarlet berry. Seeds may be removed and buried over winter in a box of moist sand. Very attractive. Provides food in winter as berries are persistent.

**Red Mulberry:** Usually a small or medium-sized tree, leaves alternate, simple, often heart-shaped at base, 3-nerved, and occasionally lobed. Upper surfaces of leaves usually slightly rough. Berries ripen in midsummer; dark purple, sweet and juicy.

The seeds should be removed from the ripened fruit, washed, then stored in a cool dry place. Planting is usually done in the spring in rich but well-drained soil. Plant about  $\frac{1}{2}$  inch deep.

Provides excellent food for birds and is a good ornamental. The White or Russian Mulberry (*Morus Alba*) is a desirable ornamental and likewise produces a good crop of berries.

**Wild, Frost, or Chicken Grape:** Climbing by means of tendrils, often to tops of trees. Leaves variable, often slightly-lobed and heart-shaped at base. Fruit in small clusters, deep blue-black, small and very tart. May be propagated like cultivated grapes. Seeds are carried by birds. The dense tangles of wild grape vines provide food for birds and game; they persist well into the winter. Other species of wild grape are: Fox Grape (*Vitis Labrusca*), Pigeon Grape (*Vitis aestivalis*), River Bank (*Vitis vulpina*), and Summer Grape (*Vitis bicolor*).

**Virginia Creepers:** Climbs by means of disc-tipped tendrils. Leaflets fine, pointed, and coarsely toothed. Fruit a blackish berry in loose clusters. Fruits are eaten by birds and the vine is quite ornamental.

**Winterberry or Black Alder:** Medium-sized shrub. Leaves alternate, about 2 inches long, pointed, with finely toothed margins. Berries about  $\frac{1}{4}$  inch in diameter, scarlet, persisting into the winter. Seeds may be removed and buried in a box of moist sand over winter and planted in spring. The persistent fruits furnish winter bird food. Very useful for ornamental planting.

## SPECIAL LICENSES

The following special licenses have been issued from June 1, 1935 to February 29, 1936:

Taxidermy .....	229
Ferret Owner's .....	66
Ferret Breeder's .....	1
Propagating .....	339
Collecting .....	19
Fur Dealer's (\$5.00) .....	202
Fur Dealer's (\$10.00) .....	289
Fur Dealer's (\$50.00) .....	15
Fur Farming .....	47
Field Trials .....	3

Crickets hear with their legs and sing with their wings.

## MISSING SHOTGUNS

20 gauge, double barrel, serial No. 12898, manufactured by N. Guyot, 12 Rue de Ponthieu, Paris, France (Name of manufacturer on barrel of gun). Value \$800.00.

12 gauge, double barrel, over and under, serial No. 1087 manufactured by Ogden, Smith & Hussey, 62 St. James St., London, England (Name of manufacturer on barrel of gun). Value \$800.00.

Notify this office or

**PINKERTON'S NATIONAL DETECTIVE AGENCY, Inc.**

154 Nassau Street, New York, N. Y.

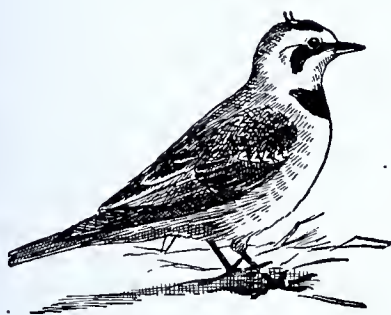


## PRAIRIE HORNED LARK

BY GEORGE M. SUTTON

ALL our lives we have read in classic poetry of the famous European Sky Lark. And we never hear a word about an American songbird whose music is just as marvelous in its way as that of its foreign cousin. American poets show a shameful lack of knowledge when they turn to the Sky Lark which they have never heard, for inspiration. Why do they not acquaint themselves with this modest brown creature whose spring performance is so thrilling?

The Prairie Horned Lark has become much commoner in Pennsylvania of late years, with the cutting of the forests and the appearance of wide treeless fields or bald hill tops where they may nest. They are permanent residents wherever found, but are likely to be commoner in winter because the family flocks may band together locally. These larks are mouse-like in both color and movements. They move about on the ground like mysterious shadows. They are often difficult to see.



Prairie Horned Lark

The prevailing color of the upper parts is dull gray brown, shaded with reddish on the neck. The throat is a pale yellow. On the breast is a black bib, and there is a black streak above the white superciliary line which terminates in the tiny feather horns which have given the birds their name. These horns are not connected with the ears at all, and are probably only decorative. The hind toe nail in members of the lark family is very long and straight.

When we see a pair of larks running about over the ground we never dream of their wonderful vocal powers. But suddenly, the male bird springs from the ground and mounts to the heavens by a series of circlings, and goes so high that he is almost out of sight. The wind blows fiercely at that far height, and he faces the blast, flying into it just fast enough to remain in one place above us. All the time faint tinkling notes have been dropping down to us as the bird pours forth his music to the wind and sun. For minutes he remains there, tirelessly singing, constantly flying. We wonder how he can endure it all. Then suddenly like a mysterious missile from the clouds he drops, wings poised to break his speed, and he alights at our very feet as unconcerned as though nothing had ever happened. He has again become the little mouse-like bird of the soil; no longer the heavenly minstrel.

The Prairie Horned Lark is our earliest Passerive bird to nest. The four or five dull gray-green eggs may be laid even in mid-March. The nest is always built on the ground, usually in cavity which is dug by the parents for it. The nest is lined with grasses and soft vegetable fibers. Two or

# Highlights on Report to the Allegheny Forest Research Advisory Council

By P. G. Platt

Former President, Pa. Div. Izaak Walton League

IT HAS in the past been a rather universal policy of silviculturists to think of forests in terms of merchantable wood. Watershed protection has more recently been recognized as a valuable by-product, but game, fish and other forest recreational resources have long been the orphan child of technical silviculture.

It is most encouraging at the present time to note a beginning of recognition of COMPLETE forest values, as is evidenced by recent press notices featuring statements by Mr. Silcox to the effect that wildlife should be given its share of consideration in forest management. We were also deeply impressed by the letter of this Council's Director, Mr. Forbes, addressed to Mr. Frank B. Foster of the Pennsylvania Board of Game Commissioners, suggesting a study of the food habits of game in the Tionesta virgin forest area. As an organization, the League professes no specific scientific ability in this connection, but is most emphatically in accord with the suggestion. Our activities are essentially those of adopting policies and disseminating information based upon investigations by those qualified to do so.

In Pennsylvania alone, upwards of one million hunting and fishing licenses are sold annually, representing an investment of nearly two million dollars. Add to this an estimate of ten dollars per sportsman spent in pursuit of his recreation, investment in camps and turnover of materials incident to woodland recreation, we arrive at a conservative estimate of not less than fifteen million dollars as an annual expenditure in Pennsylvania merely in pursuit of woodland recreation. Such a resource is certainly worthy of inclusion in any planned program of woodland management.

One of the recent developments in National conservation, on which the Izaak Walton League has looked with some alarm, is the policy of building new and unneeded roads through wilderness areas. We of course subscribe to a logical number of roads for fire protection, but fear that an over-abundance of such roads will lead to greatly increased fire hazards under existing methods of automotive travel. Besides this practical

hazard, we feel that much of the forest solitude is being destroyed. If these roads MUST be built as a part of the great program of work relief, we suggest that they be closed to public vehicular traffic, thereby reducing the fire hazard and retaining at least part of the former solitude.

In the matter of planting woodlands, we believe that in addition to wood, two factors should ever be in mind. These factors are: (1) Trees which tend to produce a maximum restoration of forest floor, thereby serving the dual purpose of enriching the soil for future production of wood, and at the same time tend to stabilize streamflow, and (2) Nut and fruit bearing trees, shrubs and even vines which provide food and shelter for game, song and insectivorous birds.

In connection with the protection of coniferous areas, we frown upon the promiscuous use of poisons intended for rodent control. The hazard of poisoning valuable species of wildlife appears to nullify, if not exceed any benefits which may accrue from this method of control.

We believe that a well-rounded plan of forest management should include a program of "stream improvement" for the dual purpose of equalizing streamflow and adding to the fish carrying capacity of such streams. Much of the work recently done along these lines in Pennsylvania by the C.C.C. camps has been disappointing in result, and in many cases no doubt harmful rather than beneficial. The reason for this condition is of course due to lack of knowledge pertaining to the subject at hand. No such project should be undertaken without receiving technical advice, and better yet, direct supervision of some qualified agency, such as the Pennsylvania Board of Fish Commissioners.

The greatest stumbling block in the path of a unified National program of conservation of natural resources appears to be the divided authority which now exists. The various phases of these resources are now administered by bureaus in the Departments of Agriculture, Commerce, Interior and War. There is no cohesion of effort, and much of their labor is worse than useless because of working to cross purposes.

three broods of spotted young birds may be reared in a season. Altogether this little bird is one of our most valuable feathered friends.

The Pioneer Fish & Game Protective Association, Allentown, Pa., organized in January 1935 with a membership of 32, left behind them a year of outstanding accomplishments. Among other things they formed a Junior League, affiliated with the State Federation of Sportsmen's Clubs, (as every club should

be) opened their membership to women, purchased and released several crates of rabbits from their own funds, and assisted in stocking game and fish supplied by the Commonwealth.

A number of public and parochial schools are contemplating the installation of in-and-out-door small-bore rifle and revolver ranges where the students, both girls and boys, can be taught how to handle firearms safely.





Numerous hunting camps were completely wrecked by the heavy snows of the past winter. The above shows the extent of damage done to one of them.



The All-Game-Feeder, designed by Dr. H. E. Henry of Martinsburg, Deputy Game Protector.

They are made of galvanized valley metal, and pieces of strap iron, riveted together. The height is 20 inches, width of container is 8 inches. The bottom of container (a) has a perforated bottom (size of #8 nail) placed at angle of 40 degrees to 45 degrees slanting from back to front, keeping front edge of bottom  $\frac{1}{2}$  inch from B feeding pan floor. This keeps the feed flowing free from bottom and air is possible to go up through the grain to prevent dampness and easier to flow toward pan.

The feeding pan is 8" wide by 8" long, attached to sides of container, this bottom to pan is also perforated by nail size holes  $\frac{3}{4}$  to  $\frac{1}{2}$  inches apart (shown on picture). Feed outlet is made by just cutting two places (as shown) in lower part of container at lowest edge of angled bottom. Upward 2 inches, the flap of metal can be bent to allow any amount of feed to flow downward and outward to feeding pan.

The pan is likewise designed to air dry the feed and allow the small euts of feed to screen through to the ground and utilized by the small birds in the woods. The slanting roof over feeding pan is made at least 2 inches larger for protrusion at sides and front to add protection to feed.

Strap iron is attached to container for placing on trees at heights 30 inches to 40 inches. While a number of poles of dead wood are placed beneath feeder to make possible a way for squirrels, pheasants and wild turkeys to reach feeder, deer can easily reach the grain in pan, and yet the feeder is up high enough to keep out of the main body of snow.

A good time to make more feeders for next winter is now while you are reading of them. This type feeder was exclusively used by Martinsburg Federated Sportsmen Club.

# HERE and THE SP

## PRESQUE ISLE SPORTSMAN'S LEAGUE ACTIVE

Dr. John J. Koehler, Erie Dentist, is the new president of the Presque Isle Sportsman's League, Erie County's organization of hunters and fishermen.

Other officers include Ralph W. Swan, vice-president; William A. Schildmacher, secretary; and James C. Hadley, treasurer.

A membership drive, recently launched has brought over 700 new members into the organization.

The League has selected the *GAME NEWS* and the *Angler* as its official publications and each member is given a subscription to one of the magazines when he pays his membership fee.

The League is also on the air. Through the cooperation of Leo J. Omelian, owner and operator of Radio Station WLEU located in Erie, it has been allotted three 15-minute broadcast periods each week and a series of programs bringing before the microphone leading sportsmen of the district has been under way for several weeks.

Among those who have taken part in the radio programs are Dr. J. J. Koehler president, James C. Hadley, William A. Schildmacher, Game Protector W. Walter Pattison, Fish Warden William Briggs, County Commissioner Thomas Flatley, Walter Weber, of the Presque Isle Bait Casting Club, and J. A. Wurzbach, editor of the *Erie Dispatch-Herald*, and an active sportsman for over 50 years.

The programs are broadcast at 6:45 p. m. each Tuesday, 7:30 p. m. each Thursday and 8:00 p. m. each Saturday.

Ray Peebles, sports editor of the *Erie Dispatch-Herald* and a member of the Presque Isle Sportsman's League, is arranging the radio broadcasts.

Cooperating with the State Game Commission in game feeding, the League had 100 men and 20 trucks at work for over six weeks, distributing game food in every section of the county, and erecting temporary shelters in many places.

## STATE TRAP SHOOT

The 1936 annual clay target tournament of the Pennsylvania State Trap Shooters' Association will be held at Bradford, the home of the president of the association, Mr. Claude Henline, and the treasurer, Doctor Vernon. Some years ago the State shoot was held there and the marksmen were exceptionally pleased. Mr. Mulhaupt, who was then on the entertainment committee, will likely serve in the same capacity. The matches, four days, will be held in June. John Schroll, Mt. Joy, is the secretary of the State Association.



# ERE WITH TSMEN

## COL. JANEWAY FEEDS GAME

Col. Augustine Janeway, Deputy Adjutant General, is a great lover of the outdoors and fed quite a few coveys of quail near his home near Bowmansdale.



Typical example of the enthusiasm shown by sportsmen's association during game feeding operations of past winter.

## HOW TO KILL A CLUB

- 1—Don't attend meetings—if you do, come late.
- 2—Find fault with the officers and members.
- 3—Never accept office. It is easier to criticize than do things, yet, get vexed if not appointed to a committee; but if you are; do nothing at all.
- 4—Heckle speakers and talk to those beside you all during the meeting.
- 5—If asked by the chairman for your opinion, tell him you have nothing to say.
- 6—Do only what is absolutely necessary. When others willingly and unselfishly help the club, howl that the club is run by a clique.
- 7—Belittle your club at every opportunity and apologize for its work.
- 8—Never bring guests to the meetings or try for new members. Then say that the club is dying.
- 9—Insist that only what was done in the past is correct; changes can only be for the worse.
- 10—After meetings tell everyone how things ought to be done but refuse to take an active part in the club or any responsibilities.—From the *Boston Transcript*.



Sticking corn and vegetables on racks which are placed above the snow.

## WITH THE CLUBS

The Elliottsburg Rod and Gun Club just completed a crow contest wherein they paid \$10 for every pair of crow's feet. The territory was limited to three townships and bounty was paid on 460 crows and 4 hawks, costing the club \$46.40.

Mr. William Cooper of Landisburg was high with 114 crows and 3 hawks, and Mr. Wayne Weibly of Ickesburg, was second with 53 crows and 1 hawk. The club gained 14 new members and 32 people made claims.

The Adams County Fish and Game Association recently spent upwards of \$200.00 for rabbits and game birds. The money was accumulated from trap shooting matches.

May 3 is the date of the annual amateur Rod and Gun Club Individual and Team 50 Metre shoot, Plainsfield, N. J.



Excellent type of brush feeding shelter constructed by interested sportsmen.



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## NEW CLUBS

Upper Providence Fish, Game Forestry Association, Montgomery County.

Howard McFarland, Oaks, President; Earl Smith, Mont Clare, Vice-President; Frank Williams, Port Providence, Secretary; and Lewis Webb, Port Providence, Treasurer.

The Blue Goose Rifle Association is a new association recently organized at Hastings, Pa., and the marksmen are looking forward to some interesting matches this summer.

The following appeared in a Canadian magazine:—"Look out for this Fellow: He Means Business!

"Notis! treasspassers will B persecut-ed to the full extent of 2 mongrel dogs which nev was over sochible to strang-ers & 1 dubble brl shot gun which ain't loded with sofa pillors. Dam if I aint getting tired of this hell raisin on my place."

B. Grisom.

A farmer was once heard to remark that all he accomplished by posting his lands against hunting and fishing was that he kept off his friends and the good citizens and that the "roughnecks" went on anyhow.

Ever try shooting at white clays with a revolver? Great sport, but the important thing to think about is the place you select for the matches.

A pair of gloves made from the tanned pelt of a woodchuck was exhibited by a hunter at a recent meeting in Sunbury. The ground hog, many sportsmen believe, should be protected. His burrows offer places of refuge for small game.

The Washington County Sportsmen's Association opened a vermin contest March 15 on weasels, unprotected hawks and owls and their eggs, stray house cats, crows, water snakes, and starlings.

The contest will close July 1.

## A TRIBUTE

The tragic news of the fatal automobile accident to Roger Toll, Superintendent of Yellowstone National Park, and George Wright, Director of the Wildlife Division, National Park Service, shocked every conservation agency in the country. Both men were members of the Commission of six, appointed by the Secretary of State, to meet jointly with a committee of the Mexican Government to study possibilities of national parks and wildlife refuges along the international boundary.

It was while engaged on this survey that the accident occurred.

Mr. Wright, incidentally, was one of Seth Gordon's very good friends, a well-to-do young man, thirty-one years old, who had specialized in Biology and Forestry at the University of California and then made wildlife conservation his chosen field.





**"Tramp that Match"**

**give us a**



**CHANCE**



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The Woodchuck Builds Homes For Rabbits

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VOL. VII

MAY, 1936

NO. 2



# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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Entered as second class matter, June 24, 1935 at the Post Office at Harrisburg, Pa., under the Act of March 3, 1879.

## JUST TO REMIND YOU—

Of the State Trap Shooting Tournament at Bradford June 11, 12 and 13.

To protect your bird boxes from stray cats.

To control predators, especially during the nesting season for game.

To avoid running down game on the highway.

To get your friends to subscribe to the GAME NEWS.



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# EDITORIAL

VOLUME VII

MAY, 1936

NUMBER 2

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## *It's Up to You!*

*Reprinted from Field and Stream*

*Editor's Note: Game Protector Edwin W. Stucke, of Philadelphia, assisted the Biological Survey admirably in the apprehension of the game "bootleggers" mentioned in the following account of Ira M. Gabrielson, Chief of that Bureau.*

TWO residents of the state of Mississippi drove furtively to a certain address in the town of Addison, Illinois, not long ago. There they met another man by appointment. The transaction that followed should interest every sportsman.

Briefly, that car, with its motor number rendered illegible, contained about two hundred live Mississippi bob-whites. These birds were illegally trapped, illegally transported to Illinois, and intended for illegal sale. Federal game-agents stepped into the picture, confiscated the birds, arrested the Mississippi "gentlemen" and charged them with conspiracy to violate the Federal Lacey Act, which prohibits interstate traffic in illegally taken game and fur species. Conspiring to violate a Federal law is a serious charge.

This is only one of numerous cases that have come to light in the efforts of the Biological Survey to stamp out the bootlegging of game which in numerous localities has become an organized racket.

In this "quail racket" the kidnaped birds are sold to someone who wants them to restock a shooting preserve. Sometimes the purchaser has no idea that he is a party to an illegal transaction. All too often he does know, but buys the birds anyway because the price is lower than that charged by a legitimate game breeder.

Why get so hot about it if the birds are only intended for release in a new locality? Turn the transaction around and see how it would seem if these birds were trapped on your own shooting ground for delivery to someone else.

Furthermore, no game bootlegger once he gets started in his nefarious business is going to stop at simply filling orders for live birds to be delivered surreptitiously. He takes all his traps will bring, sells what he can alive, and delivers the remainder dead to some hotel, cafe or club which is engaged in the business of selling your game for the profit he may make.

Along with the quail go venison, ducks, geese, grouse, woodcock, prairie chicken, snipe, fish and any other wild or stolen thing on which he can lay his hands. On the side he often deals in illegal furs. During the past few years scores of hotels, restaurants and night clubs have been convicted of the dirty business of selling our all-too-slender game resources in and out of season to patrons who were already too well fed for their own good.

The fellow who goes out and traps or shoots the game and transports it to the buyer usually comes from the very lowest type of humanity found in his community. He is often a petty thief and petty racketeer who will turn to anything except honest work. Bad as he is, the real criminals are the hotel or club proprietors who furnish him his market and the patron who is willing to pay an exorbitant price for the "distinction" of eating "forbidden fruit."

There are some queer mental kinds even in otherwise good sportsmen which make them feel a glow of satisfaction in sitting down to a dinner at which illicit game is served. It makes this type of man

a "devil" of a fellow in his own eyes and gives him a perverted sense of satisfaction in putting one over on the wardens in this or some other way. These men fail to realize that every wild animal or bird bootlegged either in or out of season decreases the amount of game which will be available for legitimate sport in the future. In reality, every hunter or fisherman who condones this traffic is hurting not the enforcement officers but all sportsmen, including himself.

This game-bootlegging system takes toll each year from every game resource. It not only reduces the available game supplies but intensifies the restrictions which must be imposed by both the Federal and state authorities if game species are not to disappear entirely.

The Biological Survey receives many letters from sportsmen's organizations and conservation societies offering help in wildlife conservation and restoration work. Here is a place where your help can be immediate and practical. Tell us when you learn that game is being sold in your community and give us all the information possible. Even with such help, it is a hard, tedious and often dangerous job for our men to get evidence that will stand up in court.

You can also help greatly by giving your patronage to law-abiding establishments, either when you take your wife or best girl out for a celebration, or when your organization holds a banquet. More than that, tell the proprietor of an offending establishment why your business is going to the other fellow.

The small force of Biological Survey game agents are doing a fine job in breaking up this traffic, and in many states earnest and efficient enforcement men are doing splendid work along the same line. We learn only irregularly of the activities of the state men, but the reports of our own small force, organized as flying squadrons or engaged in lone-handed and dangerous undercover work, locating the base of operations of these gangs and tracing out the ramifications of the distribution systems, give me a real thrill.

Most of these men are young, well-educated and enthusiastic conservationists who are willing to work day and night to bring to justice these despoilers of our wildlife resources. From California to the eastern shore of Maryland and from the coastal swamps of Louisiana to the lakes of Minnesota they have been and still are on the trail of the game bootlegger. I'm proud of them.

With an adequate force of such men the traffic could be utterly destroyed. But try as they will, work as hard as they can, they are too few to do the job alone. They need your help. This traffic directly affects the game available to every sportsman in America. It can be greatly reduced or possibly destroyed whenever you, as individuals and organizations, have the courage to place the stamp of economic disapproval on one of the meanest, most despicable and destructive rackets yet invented.

How about it, Mr. Sportsman? It's your move.

IRA M. GABRIELSON  
Chief, U. S. Bureau of Biological Survey



# New Small Game Program Launched

*Principles Which Made Pennsylvania Famous To Be Tried in Farming Regions*

**By Seth Gordon**



Photo Courtesy Biological Survey.  
Farmers Who Use Flushing Devices While Mowing the Outside 30 to 50 Yards Will Increase the Game Bird Crop.

Pennsylvania, according to competent observers, has done the "impossible." She has demonstrated that even a heavily populated industrial state with ten million people may become a sportsmen's paradise, if proper methods are pursued.

The foundation of that success was a well-planned system of refuges, surrounded by public hunting grounds, started thirty years ago, the boundaries of which refuges have been universally respected and observed. Parenthetically, it should be said that there are those who still doubt whether public hunting grounds will ever be a success, notwithstanding their popularity in the Keystone State.

While Pennsylvania has clearly demonstrated what can be accomplished with refuges in the forest country, she has not yet demonstrated whether the same principles can be applied successfully in the intensively tilled farm-game regions of the State.

And if so, who shall apply them? The State? The landowners? The sportsmen? Or a combination of all three?

These are some of the problems the Board of Game Commissioners proposes to tackle without delay, also to determine whether the old forest refuge system, if judiciously split into smaller units, will not produce still better results.

The present game refuge and public hunting grounds program, the "trail blazer" in this field of wildlife restoration, was started in 1905 on our State Forests, now containing 1,600,000 acres. Ten years later the plan was extended to lands other than State For-

ests, leased for the purpose. Then in 1929 the Game Commission began to buy lands of its own.

The game land purchase program was so popular that in 1927 the sportsmen asked the Legislature to increase the license fee from \$1.25 to \$2.00, and to dedicate the additional 75c to the acquisition and maintenance of lands for refuges and public hunting grounds. Then the purchase of game lands began in earnest, and now the Commission owns over 500,000 acres of State Game Lands, and maintains almost 200 game refuges with an aggregate acreage of 133,302 acres.

The original refuge system started with blocks of 2500 to 3000 acres each, but in late years the size of the refuges has been decreased. The big refuges have benefitted large game mostly, especially deer. Small game derived considerable benefit also, but it was far less noticeable. On many of the larger refuges small game with a limited "cruising radius"—average feeding range—lives within the refuges without ever coming out to the public hunting grounds and thereby benefiting the hunters.

Naturally forest game species got the "lion's share" of this larger refuge program, because that is the country where large tracts of land could be bought quickly and cheaply. Since all the funds available were being used to buy more land, little could be done to improve the game conditions on the Commission's holdings, except by protection, even though many of the older refuges no longer provide good feeding and breeding grounds.

No one should criticize the Game Commission for buying all the lands it could while they were so cheap, or for buying them in large blocks, in the forest regions. When it endeavored to buy suitable lands in the farming sections in the southeastern and southwestern counties the tracts available were small, the prices high, and too often the lands were not of the kind that would produce large annual crops of pheasants, rabbits, and quail.

Several years ago the Commission determined to give small forest game, especially wild turkeys, more aid in the southern part of the state by establishing smaller refuges, 250 to 750 acres each. That program, still in its infancy, has already demonstrated its worth. In addition to benefitting wild turkeys, these small refuges have increased ruffed grouse, squirrels, and other forest species, primarily by saving ample breeding stock in each refuge area.

Some years ago an auxiliary refuge program was agreed upon for the purpose of putting small refuges and public hunting grounds in sections remote from the primary or large refuges, particularly in the farm country. In no case was any rental paid for such auxiliary refuge and hunting grounds tracts. Some progress was made in this direction but nothing as comprehensive as now needed had been anticipated when that law was enacted. Certain cumbersome provisions must be modified at the first opportunity.

While the Commission was spending most of its funds for State Game Lands in the forest country, the farm game problems, involving 75% of our licensed hunters who prefer to hunt small game, became increasingly troublesome. This was true especially in the territory within a radius of fifty to sixty miles from Philadelphia and Pittsburgh, areas where the hunting populations are very dense and most of the farm lands are closely tilled.

In those sections of Pennsylvania thousands of farms have been posted annually, many of them at the behest of small groups of hunters who desired the game thereon for their exclusive enjoyment. Lands open to public hunting, even when permission to hunt was sought (as all good sportsmen should do), were literally mobbed. The leisurely, peaceful sport of our ancestors almost vanished.

To retard this encroaching menace to the joys of the unattached sportsman, the Game Commission consistently refused to stock game on lands not open to hunting by the public. Some exceptions were made where no one, not even the owner, was allowed to hunt.

This action, while it retarded the posting movement somewhat, was negative rather than positive; and the landowners rarely did anything to improve the game habitat on their farms. Clean farming has continued



to kill more potential game than the hunters bag in the Fall.

In the meantime the Commission enlarged its game farms and raised more and more pheasants, bobwhite quail, and other game. In also continued to buy thousands of cottontail rabbits from midwestern states, most of which had to be received during the winter months. Last year almost 50,000 young pheasants, 8,000 bobwhite quail, several hundred Hungarian partridges, and other game birds were produced on the State Game Farms. Over 55,000 cottontail rabbits were bought and released, shipments being stopped when weather conditions became too severe.

In many instances the officers of the Game Commission have found it difficult to locate suitable unposted lands for stocking the game shipped to them, and whenever a severe winter like the recent one descends upon us all shipments of rabbits must cease.

There is considerable doubt in the minds of many thinking sportsmen concerning the value of imported rabbits. Many even question the value of game raised on the State Game Farms. They would prefer game produced in the wild.

For five or six years past the Commission's agents have trapped large numbers of rabbits and pheasants from certain very favorable restricted areas in the southeastern part of the State for distribution. Last winter more than 5,500 of these birds and animals were trapped and distributed in that region at an average cost of less than 35c each, a foretaste of what might be done on a larger scale.

Many sportsmen have insisted that the Commission raise its own rabbits for distribution, either on game farms or by contracting with some of the 190,000 farmers to raise them. Other sportsmen urge that plans in operation elsewhere to increase the farm game supply be tried; still others stoutly demand that nothing be done which might encourage landowners to charge a fee for hunting privileges, and that the Game Commission should lease the hunting privileges from the farmers in the agricultural sections far remote from forest regions. Where the funds shall be obtained to lease and manage five to eight million acres of farm lands they do not specify.

But the great majority of the 600,000 licensed hunters seem to be in accord on one thing; namely, that immediate steps be taken to assure better sport for the small game hunter, even though it be on an experimental basis only to work out processes for widespread application later.

With all these problems in mind, the Game Commission at a recent meeting decided upon the following policies and experimental program;

1. *Primary Refuges*: Decentralize the Primary Refuge System, chiefly to benefit small game, so that the majority of the refuges will be reduced to not over 1,000 acres, and add numerous small refuges in the surrounding territory containing from 200 to 750 acres each, some of them perhaps as small as 100 acres.

Where the Commission owns lands of appropriate size without refuges thereon, establish one or more small refuges.

Put all refuges under a group management

plan, with one refuge keeper in responsible charge of a number of nearby refuge units.

Develop and manage the food and cover supply on all refuges as necessary to carry a maximum stock of game, including selective and improvement cutting work primarily to benefit game conditions.

2. *State Game Lands*: Confine future purchases in the forest regions to lands needed to eliminate interior holdings; fill out present purchase units to a reasonable size, preferably not over 10,000 acres in a block; straighten up property lines; and to lands needed for wild turkeys, grouse, squirrels, raccoons, and other small forest game species.

Continue efforts to acquire lands in areas remote from extensive forest regions, especially in the southeastern and southwestern counties.

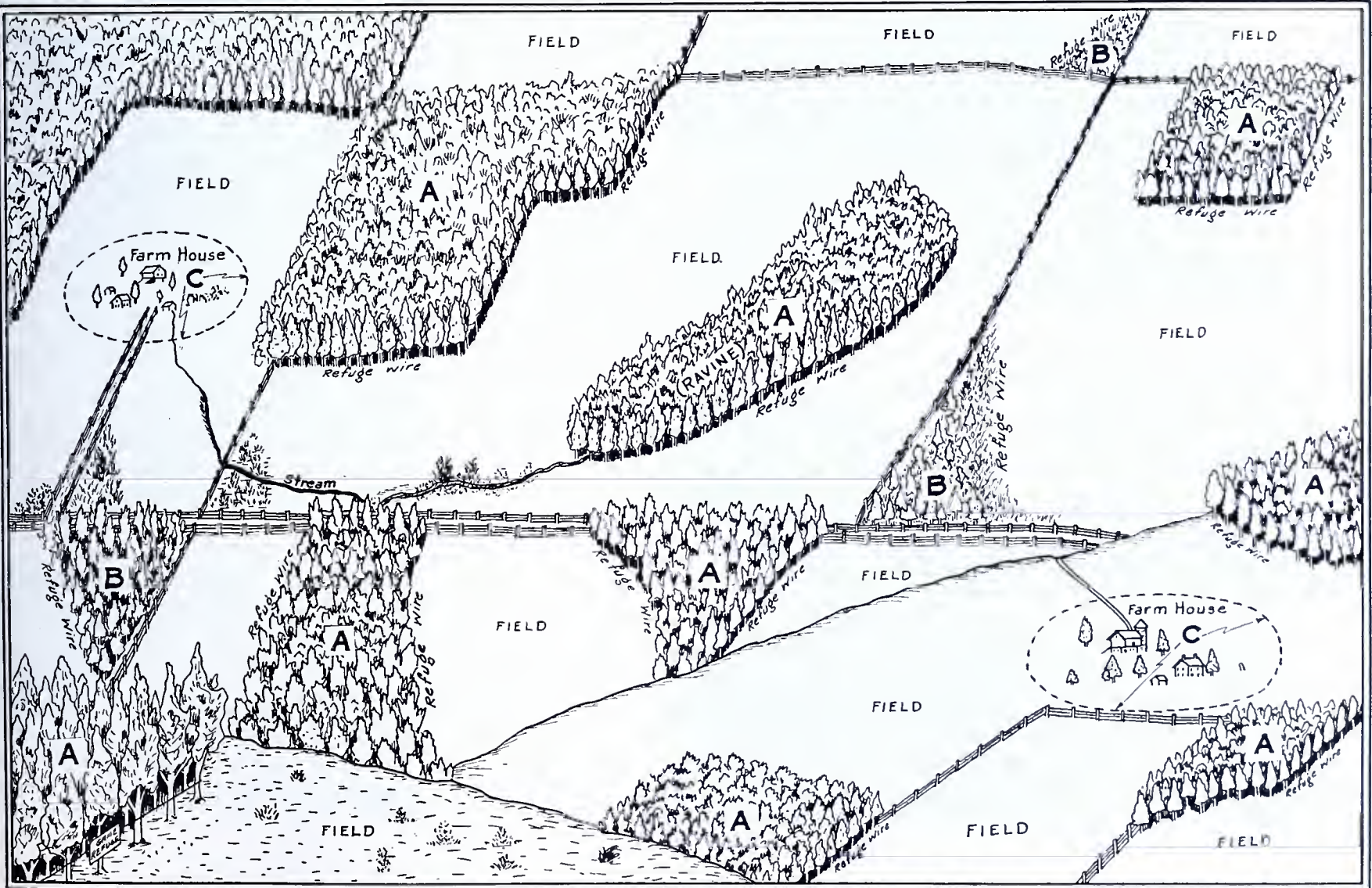
Develop and manage the food and cover supply on all state game lands, including selective and improvement cutting programs.

3. *Farm Game Refuges*: Develop a farm game refuge experimental program, under the Auxiliary Refuge Law, with public hunting grounds, by leasing lands without cost to the Commission in the counties of Bucks, Montgomery, Chester and Delaware in the southeast, and Allegheny, Beaver, Butler and Washington in the southwest, on the following basis:

(a) Locate blocks of contiguous lands, preferably around 3,000 acres, upon which numerous small refuges of two to fifty acres each may be established for pheasants, quail, rabbits, squirrels, etc., with the understanding that not over one-third of any given

(Continued on Page 13)

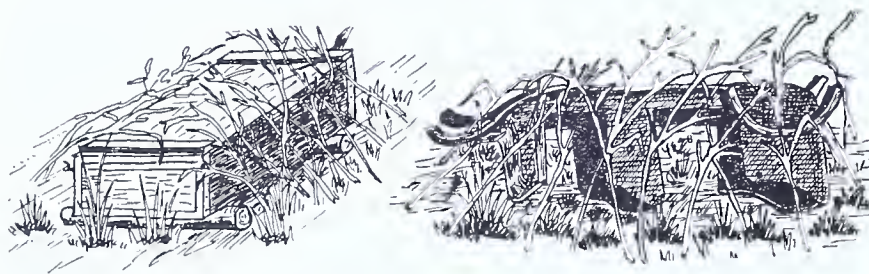
This sketch shows a typical farm scene with patches (A) and (B) of timber, brush, weed and briar growth, some of which should be set aside as wildlife refuges. Safety Zones around buildings are indicated by (C). More fence row growth would greatly increase the value of the refuges by supplying lanes of travel between the larger pieces of cover.







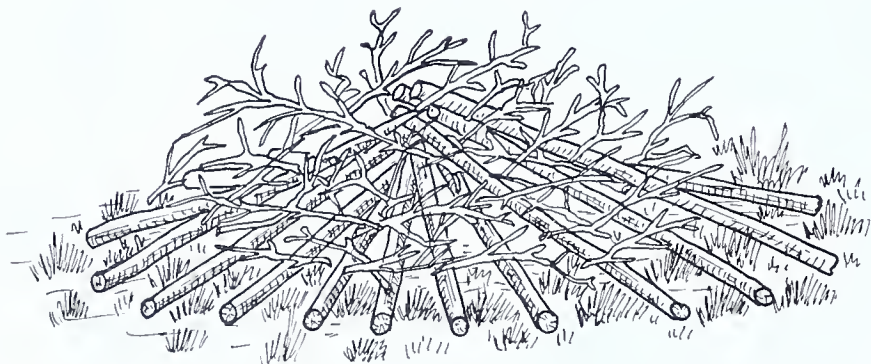
Discarded fence rails, poles, posts, etc., piled in various desirable places are good hiding places for rabbits, if placed on logs laid crosswise so that the pile is raised about 6 inches above the ground. Brush piled over the rails will afford protection from dogs. Grape vines planted around the pile will increase the food supply.



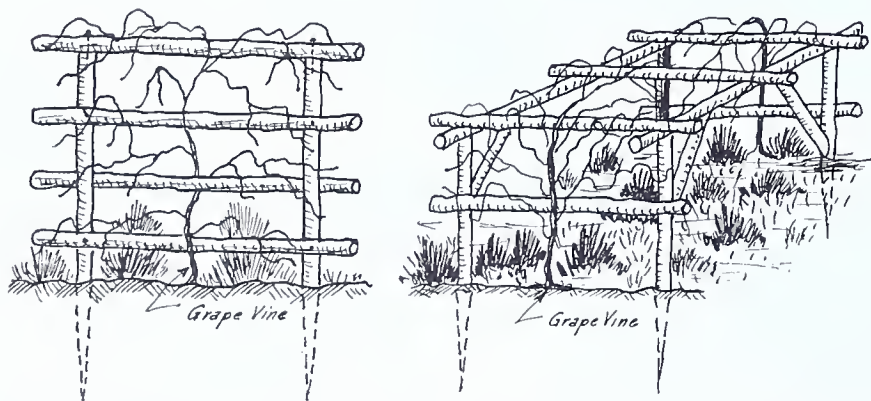
Abandoned Wagon bed

Abandoned Car body

Discarded wagon beds, auto bodies, old sheet iron and other worn out material can be made into good temporary retreats and suitable places under which to place feed for game if this material is placed in good locations. They should be well covered with brush.



Poles, logs, or discarded fence rails, piled as shown above and spaced about 5 inches apart and heavily covered with brush, furnish excellent hiding places for rabbits and other game.



Grape arbors made in openings in the woods around which are planted grape vines, grape vine cuttings, bittersweet, greenbriar, or Virginia creeper, furnishes food and cover for wildlife after the arbor becomes covered. Locust posts should be used when available. Rough poles can be used on the sides and top. Posts should be about six feet long and placed in the ground two feet.

# A Game Restoration

*Simple Ways in Which*

*Wildlife*

By James N. Moore

**T**HE Game Commission of Pennsylvania is doing everything within its power to help nature to produce a maximum annual crop of game and other desirable wildlife, but unless all those who enjoy the benefits of wildlife do their bit individually only partial success can be expected.

Quite frequently sportsmen and others interested in wildlife ask the Game Commission how they can help in the improvement of game conditions. These requests are always welcomed, as they evidence an active interest in game increase rather than the mere hunting of it. Without such widespread group and individual interest the future would be hopeless, indeed. In the hope that they may be of some help, a few simple suggestions are given below.

One of the most important things which individuals and organizations can do is the planting of food patches to grains or legumes, and the planting of shrubs and trees to produce permanent game food and cover. Information on this work has been outlined in Bulletin No. 11 of the Game Commission. Consequently it will be unnecessary to go into more details on that work in this treatise.

What wildlife needs most of all is a favorable habitat, a good home. There are many areas in Pennsylvania which are so lacking in suitable game habitat that a long time will be required to produce this naturally. On such areas much good can be done quickly by little groups of sportsmen getting together and building dozens of temporary retreats and shelters, and by dedicating desirable areas solely to wildlife. Several suggestions for these are given in this article.

In addition to suggestions illustrated in the sketches, there are many others of like value that can be devised. Naturally the locations for them are all important. They can be placed in pastures, abandoned fields, over-grazed woodlots, and other places where shelter is deficient. Before building them consent should be obtained from the landowner, which will often lead to closer cooperation between the sportsmen and the landowner. It is important wherever possible to cover over retreats shown in the sketches with plenty of stones or brush as a protection from dogs. *The more cover the better!*

There are also many other things which can be done in cooperation with farmers. If the farmer is properly approached he will, in many instances, lend his assistance which is conducive to more friendly feelings. A few suggestions for use where the help of the farmer can be secured are also shown in sketches, since that seems a more desirable way to tell the story.

Wherever possible farmers should be encouraged to leave at least some brushy growth along fences. Untold harm is done



# Job for Everyone

## Can Help Improve Conditions

to the cause of wildlife through the clearing, each year, of all fence lines. While such practices tend toward neatness, yet they destroy the very nesting cover which wild creatures must have, including the food plants and the vegetation on which insects are found. They also destroy much valuable cover along which game birds and animals travel to other feed. The leaving of brushy fence rows is sometimes frowned upon as poor agricultural practice, but there are many advantages to it.

Ornithologists have for years pointed out that game birds are beneficial to agriculture in consuming weed seeds and insects. They have also shown where game cover has benefited agriculture by harboring song birds which serve as a check on insect pests. The dollars and cents value of wildlife to farmers in this connection is difficult to evaluate, but it is without question enormous. An estimate of the value of wildlife in destroying insects has been made by W. L. McAtee of the U. S. Biological Survey. This estimate is 22.6 cents per acre for the eastern region of the United States and 13.3 cents per acre for the western region. It would mean for Pennsylvania a value of approximately Seven Million Dollars (\$7,000,000). Such valuable allies certainly merit consideration.

Apple trees provide a source of much food to all kinds of game. There are, in most wooded areas of the State, many wild apple trees, which, if pruned, would bear a crop of fruit. All pruned branches should be piled to provide cover and food for rabbits. Many of these apple trees, as well as grape vines, hawthorns, sumac, briar patches, etc., are often suppressed by other competitive growth. Wherever permission from the landowner can be obtained, and where these food plants can be released from suppression without removing too much valuable tree growth, much good to the game food supply will result if the competitive growth is removed. The removal of some of the growth near these food producers lets in sunlight which is required for healthy growth and the production of good crops of fruit.

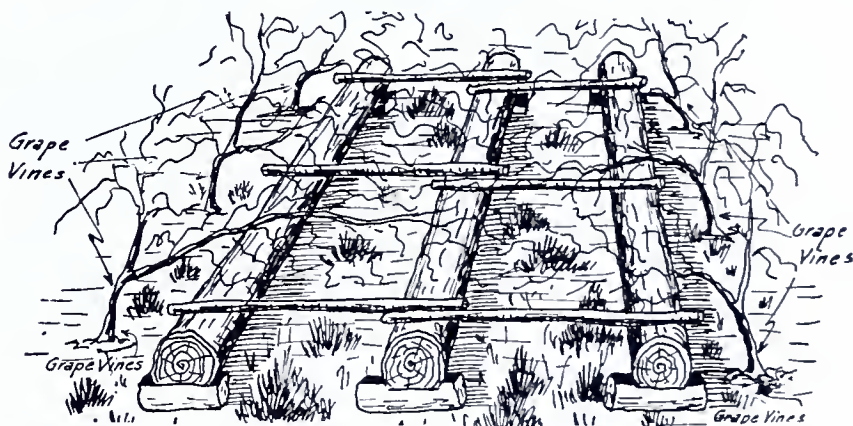
Pennsylvania's refuge system has worked wonders in the big forest areas. Now the next job is to make the same idea do equally as well in the small game country. That means many thousands of small refuges must be created and maintained. Numerous small game refuges can easily be set aside and maintained by sportsmen throughout their favorite hunting territory. These refuges need not be large. Areas of a few acres (2 to 10 each) in particularly desirable locations for game birds and animals will save annually enough seed stock to insure a continued supply of game in the adjacent territory. These protected areas likewise make favorable locations in which to



Two rows of stones set on side with flat ones laid crosswise as above, then other stones or brush piled up over the whole tunnel, make a desirable escape cover for rabbits. The bend in the tunnel prevents hunters from driving the game out by poking a stick in the opening. The opening should be about 4 or 5 inches square and each section 4 or more feet long.



Where a grape vine, bittersweet or Virginia creeper runs up on or near a tree of little commercial value, cut the tree, but not the vine, and permit the vine to form a tangle over the fallen top. Permission must be obtained from the landowner. Makes a better cover if cut in summer time when leaves are on and not cut entirely through the stem.

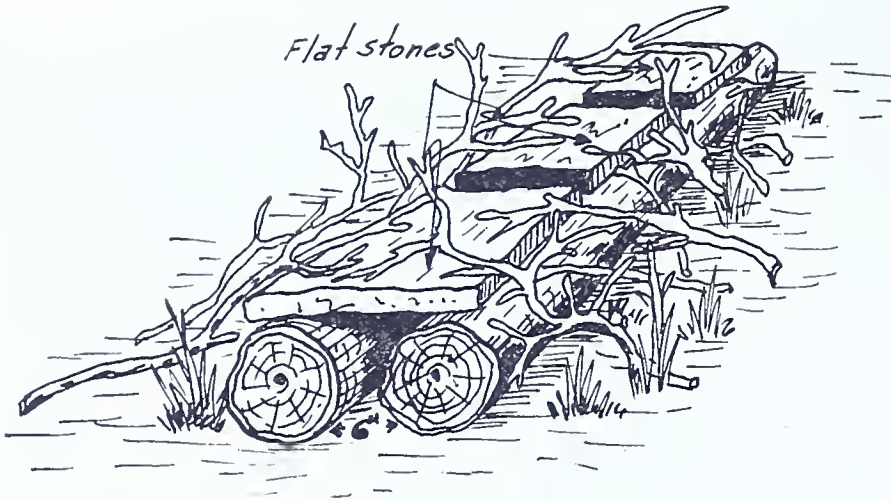


Brush piles with supporting logs or stones underneath can be used to provide space for escape cover for rabbits, grouse, quail and ringnecks. Cuttings of grape vines, or some other vine such as bittersweet or Virginia creeper, set near the pile will assist in furnishing food. Logs should be 8 or 10 feet long and spaced about 4 feet apart with plenty of cross poles to prevent brush from sagging to the ground. Logs should not be raised more than about 6 inches above the ground in order that dogs cannot get underneath.



Discarded culvert pipe, hollow logs or old tile laid in a brush or briar thicket and covered with stones and brush is a good escape cover for rabbits. If sufficient brush is covered over these, they may be placed in old fields, pastures, etc.

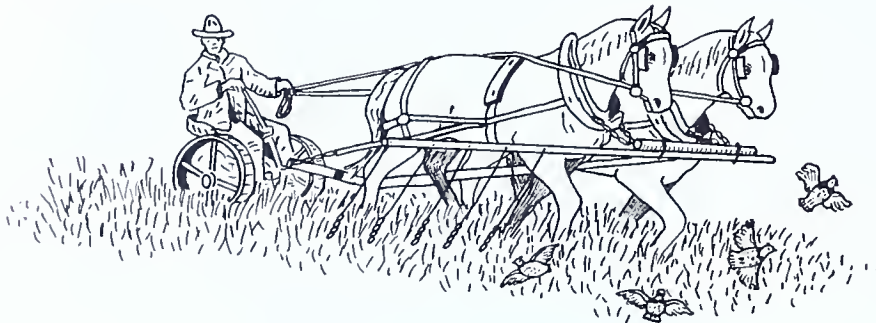




Two logs 8 or 10 feet long laid side by side about 6" apart, and well covered with brush or stones, provide escape cover for rabbits or ringnecks.



Stiff crooked brush, particularly oak branches, placed in small piles on grass sod makes very good bedding grounds for rabbits. It should be placed in a field or pasture with southern exposure, near a woodlot or briar thicket.



The English flushing bar consists of a light-weight pole about ten to twelve feet long, attached to the front end of the tongue of the mowing machine, and projecting over the path of the cutter bar.

From this pole, in the approximate positions shown, and 8" to 10" apart, are suspended short wires, to the ends of which have been attached short lengths of old chain (old cross links of auto chains are excellent). The ends of the chains should just drag the ground so that in mowing they will sweep lightly over and through the grass.

In order to prevent the inner chain from tangling in the horse's feet when turning, a diagonal wire should be run from the middle of the pole to that chain, attaching it about half way down the inner wire.

The best means of attaching the pole to the tongue of the mower is to make up two brackets of old strap iron, in the form of a right angle, with each arm about eighteen inches long. These should be drilled for 3/8" bolts by which they are attached to the tongue. The pole may then be fastened by means of bolts or wired to these brackets. If it is felt that this is too complicated, the pole may be wired to the neck-yoke, but the brackets are easily made, and are far more preferable.

When a nesting bird is flushed, jump the knives of the mower over a patch of grass around the nest. The bird will return to the nest. It is important that flushing devices be used while mowing first 30 to 50 yds. around edge of fields where majority of game birds nest.

feed during the wintertime, and in which stock from game farms can be placed.

The planting of grape vine cuttings requires relatively little work and much good to the game food supply results. The layering of grape vines and later removing the resulting small rooted plants to other locations is easy to carry on. Transferring hawthorn, small apple trees, blackberries, and other food producers from a place where they are especially plentiful to other locations will spread out the game food supply and the possibilities for cover will be increased. The planting of willow cuttings along stream banks where permission can be obtained will benefit both fish and game.

Comprehensive predator campaigns in the interest of the conservation of wildlife, and in the case of crows for the protection of fruit and grain crops, should always be carried on. The losses to game, and the eggs and young of song and insectivorous birds, by crows and other predators each year is appalling. Any program to decrease their numbers assists in conserving wildlife supplies.

The hunting of crows provides a late winter and early spring (especially the nesting season) sport when there is no open shooting season for game birds or animals. Prizes for the most crows and other known killers shot by individuals in each organization are sure to provide an incentive for more activity in reducing the numbers of these enemies of valuable wildlife. Don't overlook the abandoned house cat!

You can also render a great service to wildlife by urging all dog owners to keep their pets from roaming at large during the breeding seasons for wildlife.

Hundreds of thousands of birds are destroyed in Pennsylvania annually during the harvest season. Farmers, wherever possible, should be encouraged to use flushing bars on mowing and harvesting machines to prevent losses of game birds and eggs during the hatching season. Patches of grass around the nest should be saved by raising the knives of the mower, and the birds will immediately return and hatch their own broods. Arrangements should also be made to take care of the eggs when a nest is mowed over or the mother bird crippled before being located.



Nesting cover patches saved around a tree or clump of trees and odd or unused corners of the farm should be encouraged wherever possible. Fencing them to exclude stock is especially desirable.



There is a decided need for these flushing devices. Their potentialities are unlimited. It has been estimated that if only one egg were saved for every acre of land in hay, wheat, oats, etc., over 167,000,000 birds would be saved annually in the United States. This great potential benefit far outweighs any slight inconvenience or the value of patches of hay left standing.

A number of different types of flushing bars are now in use. Illustrations of two of the types are shown and described. The English type, perfected by Dr. P. F. English, has proven particularly effective.

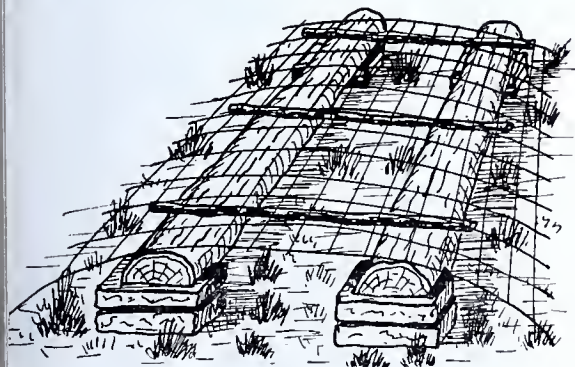
If the supply of wildlife is to be continued, more and more effective management of all land usable by it must be carried on. There is an ever increasing interest in the sport of hunting. The United States Senate Committee on the Conservation of Wildlife Resources estimates that there has been a 400% increase in the number of hunters and fishermen during the decade ending in 1930.

During the past ten years in Pennsylvania there has been an increase of about 25% in the number of licensed hunters, the number now being double what it was in 1913 when the resident license law became effective. Good roads and automobiles have made it easier for hunters to reach the fields and forests.

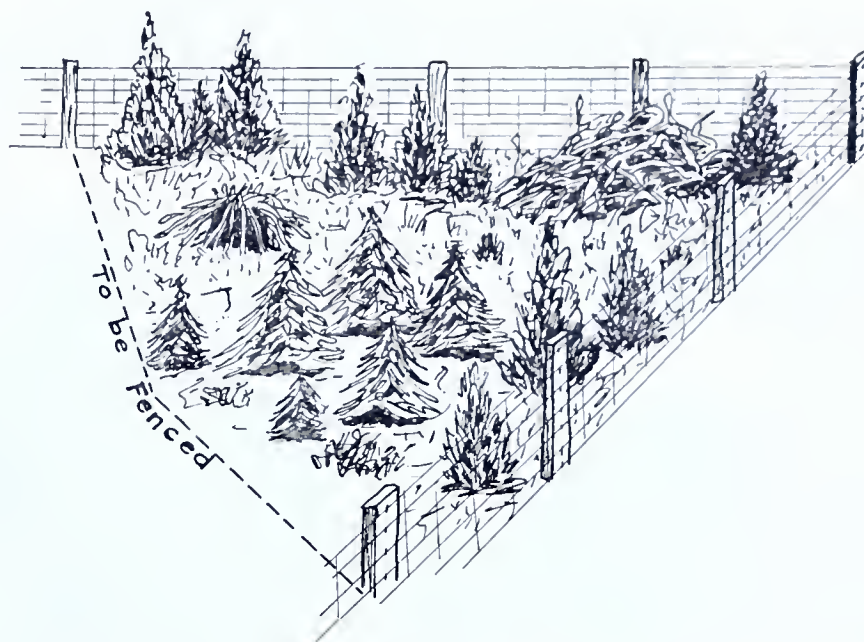
Along with the above demands upon game for sport there has been a gradual deterioration and destruction of food and cover, and other factors have adversely affected wildlife habitats. Everyone interested in having Pennsylvania retain her position as a good game State must do his bit toward assisting nature to restore and maintain proper environmental conditions for wildlife in order that we do not lag behind in the great conservation parade.

Here are things which you and your friends can do with your own hands in idle moments, without any large cash outlays. Every organization in Pennsylvania should make this a part of its activities and carry on such a program every month in the year, and every year.

Sketches by L. A. Mackey

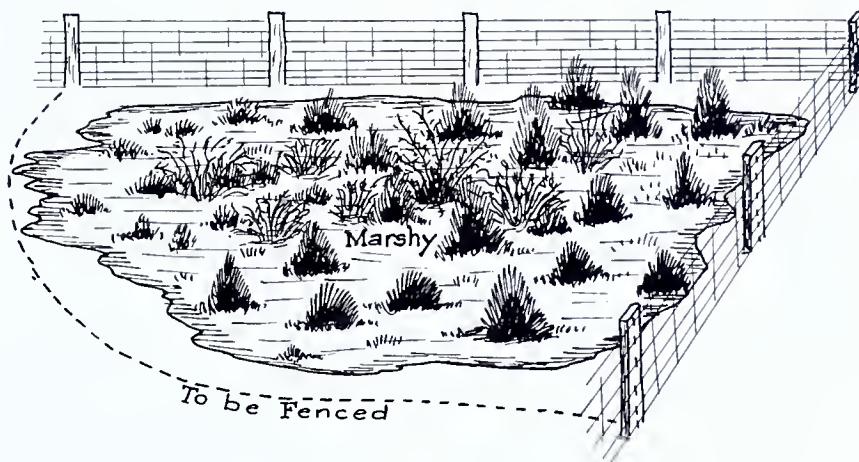


Discarded wire or old bed springs laid on logs or stones and well covered with brush, are used as retreats and winter feeding shelters by quail, rabbits and ring-necks. Should be spaced about 4 feet apart and be 8 to 10 feet long, and raised about 6 inches above the ground.

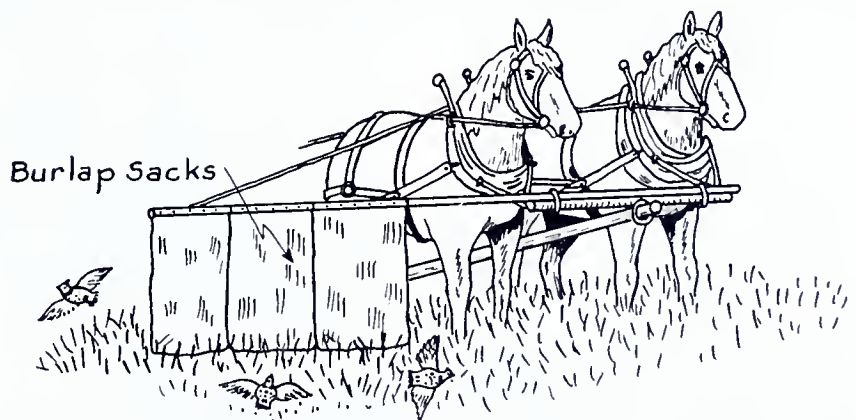


Where unused, rough or rocky corners of fields can be located or where there is a ditch bank or gullied area arrangements may be worked out with the farmer to permit the changing of a fence or adding a little additional fence, to exclude these from domestic stock. Such areas should then be planted with one or two clumps of evergreens, briars and berrybearing shrubs, which can be transferred from other spots.

The fencing of small plots in the farmer's woodlot or worthless patches out in the fields will soon grow up to briars and brush which will furnish food and nesting cover for wildlife.



In cases where a swale or marshy stretch of ground is found, especially in ringnecked pheasant territory, permission should be obtained to fence it against pasturing stock. The planting of willow cuttings and certain shrubs which grow in moist locations will help to improve food and cover conditions.



The burlap sack flushing device is of simple construction. A light bamboo pole extends out from the neckyoke and burlap sacks attached as shown in the sketch. The sacks are weighted slightly to hold them down—cross links from old tire chains are good weights. The outer end is supported by a strap from the hames.

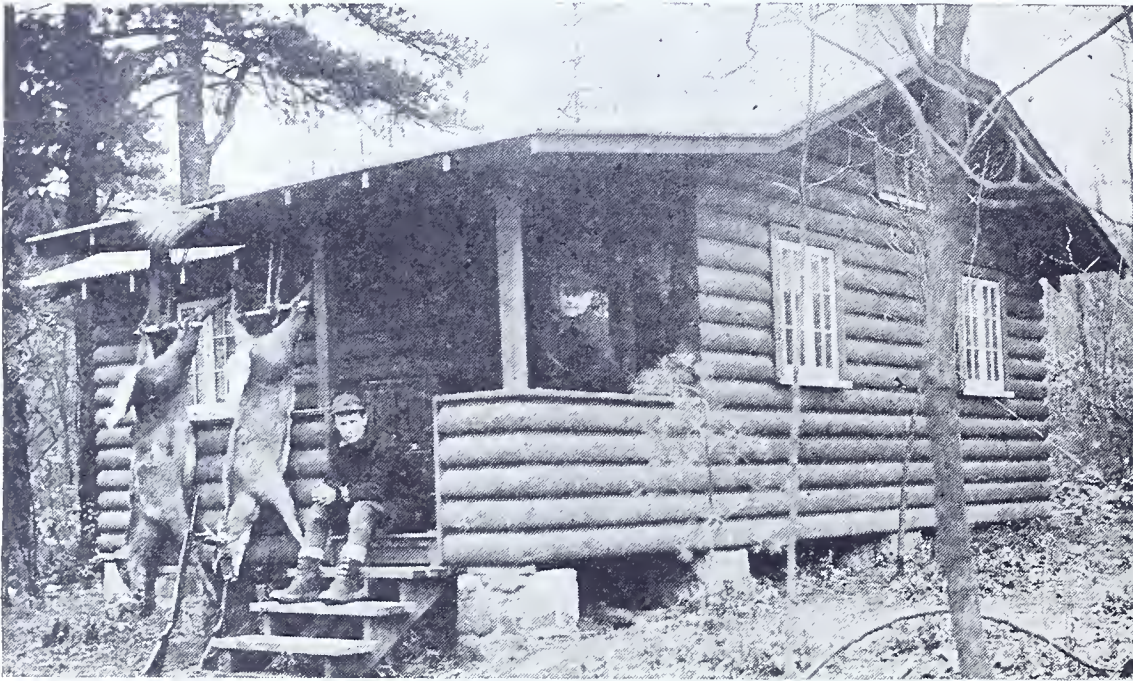
When a nesting bird is flushed, jump the knives of the mower, leaving a patch of grass around the nest. The bird will return and hatch her young.

(Additional illustrations on Page 24)



# How the Account Stands

By J. Q. Creveling



Kenneth Rohlfing, Lehighton, left, and Martin Martz, E. Mauch Chunk, right, with deer bagged near Lake Harmony, Carbon County.

**I**N THESE days, at some of the Sportsmen's gatherings, we hear a plea made that more should be done to induce farmers to increase game species on their farms and remove the "No Trespass" signs, if it could be done in some manner mutually agreeable to the farmers and the Sportsmen, and make hunting conditions better than they are now.

Let us look at this subject for a short time. In Pennsylvania we have farm lands, and we have mountain lands and wooded hills, which we style forest lands; the forest lands are almost as great in extent as the farm lands. It is a peculiar state, full of mountains, interspersed with beautiful fertile valleys. These mountain forests should not be wasted, but will be, if not cared for. Much game is now found on the forest lands as well as on the farm lands, much of this game being a second growth crop. Nature's supply, thirty years ago and prior thereto, was pretty well exhausted, but there was still enough for brood stock.

Protection and re-stocking, but principally protection, has restored the game life of this Commonwealth to a remarkable degree; and through it, from year to year, the game species have been considerably increased.

A great deal of effort and much money have been devoted to this matter of game restoration. Sometimes, however, we get the erroneous notion that man has brought about all of this increase of game. Principally, man has, through his game laws, furnished protection and has furnished some artificially raised stock and a little feed at times; nevertheless, the game species, under this protective system of the Game Code, have themselves increased the numbers of their species, where increase has been made. For the greater part, this increase of game has been the result of an endurance contest between man with his gun and dog, on the one side, and the game birds and animals themselves, on the other side.

The endurance of the game, for the most

part, has resulted from the ability of the game to protect itself and live, in spite of all the handicaps in the contest. It has been principally brought about by its own ability to find food and shelter for itself, and safety when dangers arise, supplemented by the ministration of the Game Code in certain particulars, chiefly in protection.

The great desideratum in the matter of increasing game is in its natural reproduction, after being once stocked, and on its ability to take care of itself, to live on the food it happens to find in forests and in abandoned fields, and in its precarious habit of glean- ing on the farms after harvest time and picking up what the farmer is unable to get.

Generally, and quite naturally, the farmer would take it all, if he could get it, and profitably use it, but in all his careful harvesting, he drops some, and that, if the birds are careful and wily, and able to withstand dangers and troubles and enemies, they may get and feed upon. This provides them grain, or other food on the farm, but usually, and almost constantly, at great hazard to their lives. Yet, it is occasionally now witnessed, and to some extent enlarging, that they happen to assemble on the farm of a Sportsman, a real, fair-play sportsman, who will gladly welcome them to what he cannot himself get, and to what they can get for themselves, principally, and he will protect them while doing it.

This is very acceptable and, in a sense, generous. Yet, we find that almost universally, with here and there an exception as above noted, the food of the game is what they can find, take, or steal—if we must use the word in the raw; and if they are caught stealing something they most like and need for food and existence, which the farmer has planted, they are treated as felons and doomed to death and shot by the firing squad. This is particularly true as to the deer. Yet, we must admit that

the practice is not universal, since many observe it in silence, though they suffer the game to shift for themselves.

Take, for instance, also, the robin and the cedar waxwing. They are both beautiful birds; yet, if they are found stealing cherries from the farmer's cherry trees, they are sincerely condemned. There are but few farmers who would not kill them, unless indeed restrained by the Game Code. The first impulse is to treat them as felons. It shows that our bird life and our game life is a precarious life, and the attitude of the farmers toward them renders their existence attended by fear, and they must be very wary, alert, clever, active and sly, if they would live on what the farmer owns and can get for himself; and the commandment "Thou shalt not steal" is applied pretty strictly to all the game species. Therefore, it seems that we have game largely because the game can escape and endure and evade its enemies, and get some food regardless of all the hazards. True, there is a growing sentiment, which ought to increase pretty rapidly, that it pays to take care of the birds, because they are, in the main, an asset to the farm and the orchard, worth real money to the farmer.

The truth is spreading, and now the relation of the farmer to the birds and game is beginning to soften some, since the farmer realizes it is of some benefit to him, and

Bear killed in Potter Co. in 1925  
By E. C. Mahaffey, Mahaffey, Pa.  
Weight, 565 lbs. In 1933 he killed  
another weighing 468 lbs.





he is admonished that the laws protect these creatures, and he might be fined if he pursues his natural bent to kill them out of season, or on impulse, and the educational features of certain of our people have brought the farmers up to some cooperation in saving them, meaning those who see and are willing to accept these benefits. Yet the farmer generally has not wholly learned to love the strangers who come upon their farms in the open season to shoot some of the game found there.

Those who furnish the money necessary to do the things that game protection requires to be done, the farmer has often no use for; perhaps, a few of them, his close influential friends, he will tolerate or welcome, or even invite, but not the general mass of the hunters. So he posts his lands, inviting these strangers, with dogs and guns, to remain away, stay off, "beat it," and "get to h... out of here." They don't all do that, nor do half of them, and, by a closer calculation, perhaps not one-eighth of them, but that eighth is now pretty close to a correct estimate of those who do post their lands, and who hate the "foreigners."

Perhaps, it is too much to ever hope for, but, as time goes on and the people come to think about things with a wisdom begotten of both thought and experience, and the goodness of the game, and friendliness among people, I sincerely do hope, when I consider all the phases of wildlife, that the time will come when all the landowners will eventually come to regard the open hunting season in the late fall, after the crops are all gathered and no injury can be inflicted upon the soil, as a period of recreation, homecoming, hand shaking, friendliness, visiting, kindly greeting and mutual enjoyment between themselves and Sportsmen all participating in quest of this game.

I do not believe that there could be any closer bond established or effected, or imagined, between the city and town people and the farming population, than could, in this manner, be engendered through this open season hunting period, freely enjoyed by all, if we looked at it right and with open mind. It would foster a spirit of common brotherhood, an interest in and mutual respect for each other, a bond of union, a love of country.

In this matter of game, and bird life, and vermin control, and trapping, and bounties on noxious animals and checking of the numbers of birds of prey, and re-stocking of game and protecting the wild deer, all contemplated in the Game Code generally, there is so much of mutual benefit between the farmer and the Sportsman—so much, that I think if we sat down and carefully figured it out—we would find that it would be pretty close to a fifty-fifty proposition, as the account stands at the present time, with the farmer getting a little the best edge on the financial end of the accounting. I believe this, because the Game Code really aids the farmer, if we set up the account fairly.

In the beginning, we call attention to the protection of all the beneficial insectivorous birds, a host of them eating millions of insects which prey on vegetable life, fruit life and tree life—pests, millions every day. These birds are guardians of orchards, fields

and woods. The protection of these valuable birds is found in the Game Code, and nowhere else. Then next, we have the bounty payments on noxious pests, animals and birds of prey; for instance, the weasel, the wildcat, the grey fox, and the goshawk, all destructive to farmers' interests and kept in check by a bounty which now exceeds one hundred thousand dollars a year, paid by the hunters under the provisions of the Game Code.

Then the Game Code protects certain fur-bearing animals, out of which, by trapping, a goodly sum may be realized by the farmer boys in the late fall and winter, by trapping valuable fur animals. Through the supervision of the Game Code and protection, game is increased on the farm, and more can be taken by the farmer, even though others do go in quest of it; and, finally, the farmers in the early winter may and do join with the Sportsmen in the deer woods, and not only spend a week in royal sport,

hunting season, more hunters than he would like to see, or care to see, and some whom he hates to see, if he will just remember that each hunter paid into the game fund two dollars for the privilege of hunting, and to provide game for stocking when the stock gets run down too much, and to do the things we have spoken about, he should rather rejoice to see the great interest created in game and the love of the sport.

He should rejoice because of the protection and management, which inures to his benefit, as I have above disclosed, and not be sour and disgruntled because they shoot some game on his farm, and in his hatred or covetousness proceed to post up his lands, arrest them for trespassing and fine them, or drive them off his land, or seek to so control the hunting rights on his farm as to demand additional pay for merely according his neighbor and friends, and even the stranger within his gates, the opportunity and the pleasure of shooting a few birds or



Members of O. M. Campbell Camp, Camal, Pa., and bear killed by Nelson Bassler, Allentown, one of the party.

but bring home the deer, and in great numbers; or, if they hunt only on their own land, and that of their neighbor, with his consent, they need not pay for a license.

Some hunt the deer and the bear not only on their own lands, but in the mountains, some on state owned lands bought by the hunters, who pay an annual charge to the municipalities in lieu of taxes, and some hunt on other forest lands, owned by others than themselves. Thus we see that it is really a kind of mutual benefit society.

Now we must admit that the farmer fares pretty well through the ministration of the Game Code, and the spending of money contributed by the Sportsmen, and his spending in various ways, and if he does see on his farm on the first day of the

rabbits, or quail, and missing many more, in the pursuit of a mere recreational sport. He should not be disturbed by the firing of a gun or the barking of a dog, or cultivate a spirit of hatred.

Much of this distasteful attitude toward the hunters could be obviated, indeed, if the hunters would improve in their own practices and courtesies, but not all of it. It will take some time for the growth of friendliness to spread out, and some thought, and some reflection; yet, if examined into without envy or malice, or hatred or selfishness, there will grow a wider cooperation between the farmers and the Sportsmen, because of a mutual benefit to all under the State's preservation of the game and protection of beneficial wildlife.



# Progress at the State Game Farms

By Charles W. Wessell



Pure  
Mongolian  
Pheasant  
Breeders  
obtained  
for Jordan  
and Fisher  
State Game  
Farms.

AS this is being written another game breeding season is at hand on the Pennsylvania State Game Farms and it would seem appropriate to review at this time, by way of report, the several new operations, changes and improvements which have been authorized and accomplished by the Board of Game Commissioners in this particular division.

These new activities which have been initiated at the farms during the past twelve months were designed to accomplish increased efficiency, improved maintenance, broader experimental activities in connection with such vital species as the Ruffed Grouse and Cottontail rabbit, and to establish, at minimum cost, the proper system necessary to meet the requirements of the Board's present policy of game stocking and distribution.

This policy, which calls for the rearing of adult pheasants at the several farms also provides, at no increase in yearly expenditure, for a greater production of Hungarian Partridges and more adequate experimental operations with Ruffed Grouse propagation.

## Thousands of Pheasants Saved

The wisdom of the Board's policy of holding Ringneck pheasants for Spring liberation was thoroughly vindicated during the past severe winter and the disastrous flood period of early spring. Thousand of birds were thus saved which, had they been liberated at an early age, could hardly have survived.

Aside from the safety factors involved, the restocking of adult cock birds is designed materially to increase natural propagation in the wild state and to maintain a better sex ratio of cocks and hens. Under this system the birds are in the field during the vital reproduction period.

Through spring restocking the natural reproduction by released pheasants in the wild state is accomplished before the birds face the sportsmen's gun. Protected as they are by law, hen pheasants raised at the farms under this system are liberated as

soon as they have reached the proper degree of maturity.

Efforts are being made to establish the same system with restocking of Bobwhite quail by liberation, prior to the natural reproduction period, of increased numbers of adult birds.

Another benefit derived from the adult bird program is that it provides for an increase in the number of day old chicks available to meet the greatly increased demands from sportsmen in all parts of the State.

## Trained Personnel Advanced

In the interest of maintaining that degree of efficiency already built up on the several farms and in strict adherence to Board policy, there have been no changes whatever in the trained personnel at any of the farms. The several superintendents, their assistants and trained employees have not only been retained, but have also enjoyed the benefit of increased cooperation and assistance derived from experienced and efficient direction.

Several former per diem employees, who have demonstrated outstanding ability and skill, have recently been placed on the permanent staffs of the farms, a practice which the Commission plans to continue, to encourage part time workers to acquire increased knowledge and efficiency.

## Production Reached Peak in 1935

The number of Ringneck pheasants and Bobwhite quail produced at the Fisher, Jordan and Loyalsock State Farms during the past year reached the highest mark in the history of the Game Commission. And more Wild Turkeys were raised and shipped from the State Wild Turkey Farm than ever before.

In addition to this more than three times as many Hungarian Partridges were raised as during the previous year and considerable promise and satisfaction was derived from a limited but improved Ruffed Grouse experiment.

One of the most important and successful operations carried on at the farms during the past year was raising to maturity and holding for spring restocking nearly 6700 male Ringneck pheasants. This was accomplished without appreciable loss through one of the worst winters ever experienced.

The covered pens necessary for holding this large number of birds were not available at the several farms. These had to be created with wire and posts salvaged from fences and pens located on abandoned fields and on untillable, useless ground. This material, of little value to the Commission where it was, had to be taken up, the posts scraped of rust and painted, and replaced on fresh tillable ground at the Fisher and Jordan Farms.

## Aided by W.P.A. Projects

In order to accomplish this and other improvements necessary at the several farms, a considerable amount of labor was required and secured, at no cost to the Game Com-



Rebuilding Washed Out Dam.



mission, through the Works Progress Administration.

Six projects were obtained for the four State Farms. Two at the Fisher Farm near Schwenksville, two at the Jordan State Farm near New Castle, and one each at the Loyalsock Farm near Montoursville and the State Wild Turkey Farm in Juniata County.

Included in the scope of the work covered by these projects were improvement of buildings and equipment, painting, road grading and building, repairs to washed out dams and bridges, construction of pheasant laying fields, rearing fields, and covered holding pens, planting, flood control, and many other operations of less importance.

It was largely due to efforts put forth toward flood prevention on one of these projects that serious damage to buildings, equipment and birds was averted at the Loyalsock Farm, from unprecedented floods in the Williamsport area.

Upwards of \$60,000 in labor was secured from the Federal Government with which to carry on these six W. P. A. projects. The total amount of materials and equipment necessary in connection with this work and contributed by the Game Commission was less than \$5,500.

#### **Adequate Experiments Established**

The need for adequate experimental operation in connection with the successful artificial propagation of Ruffed Grouse, Hungarian Partridges, and Cottontail Rabbits has been met by the acquisition of high grade, hand-reared breeding stock and improved equipment.

Twelve pairs of hand-reared Ruffed Grouse have been added to the breeding stock at the Fisher Farm, and arrangements for obtaining additional hatching eggs have been completed.

Hand-reared cottontail rabbit breeders housed in equipment of improved design constitute an experiment of inestimable value established at the Loyalsock Game Farm. A limited number of Cottontail rabbits were reared with this improved type equipment during the past year and several valuable discoveries were made in feeding and housing methods.

One of the main purposes of this experimental work is the perfection, if possible, of simplified, low-cost equipment for the successful raising of game in small quantities by the many individuals and groups of sportsmen throughout the State who are showing interest in propagation, and putting forth progressive efforts in assisting the Game Commission with its restocking program.

#### **New Breeding Stock**

Pure Mongolian pheasants have been added to the breeding pens at the Jordan and Fisher State Farms, furnishing new blood and looking toward the permanent yearly production of this valuable species in satisfactory numbers.

The pure Mongolian pheasant, one of the hardest species of Ringneck, strong of flight and equipped by nature to withstand the most severe weather, has established himself as one of the most valuable birds for restocking in Pennsylvania coverts.

Every endeavor will be made to produce this species in increased numbers and birds of constantly improved quality.

The State Game Farms have gone steadily forward and every effort is being put forth to see that they continue to do so.



**W.P.A. Workers Rebuilding Road and Bridge at Fisher State Game Farm.**



**New Ruffed Grouse Breeding Pens.**



**Constructing Covered Holding Pens of Salvaged Material.**

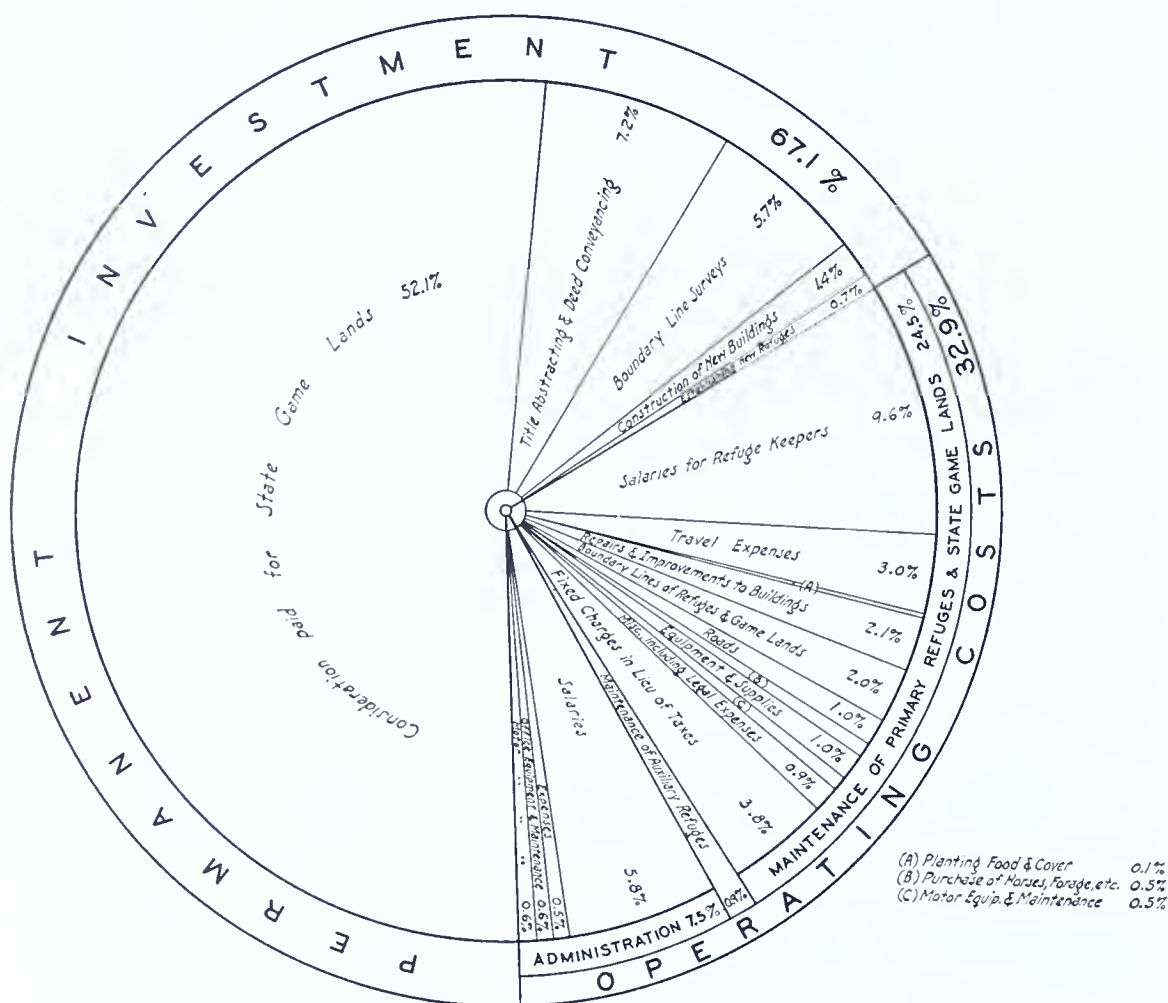


# Sportsmen Buy Vast Hunting Grounds

*How the Accumulation of Seventy-five Cents from Hunting Licenses Has Been Expended*

*By W. Gard Conklin*

PRORORTIONAL EXPENDITURES  
FOR  
STATE GAME LANDS AND REFUGES  
DURING THE  
FIVE YEAR PERIOD JUNE 1, 1930 TO MAY 31, 1935



BUREAU OF REFUGES & LANDS

Editor's Note: This article pertains to N. E. Slaybaugh's article "Spending the Sportsman's Dollar"—Page 2, April Issue.

THERE is an old saying that "money talks," and another to the effect that "many grains of sand make a mountain."

These sayings or proverbs, or whatever they might be called, were well understood by the organized sportsmen when they induced the General Assembly, in 1927, to increase the Resident Hunting License to \$2.00, earmarking the seventy-five cent increase for the acquisition of State Game Lands, the establishment of game refuges, and the maintenance of Pennsylvania's system of game refuges and public hunting grounds.

The small increase has been scarcely noticeable to the individual hunter, but the accumulation, which amounts to about \$400,000 per year, totalled \$3,588,081 for the

period of nine years. Quite a good sized mountain built up from the many grains of sand.

And did this money "talk?" It did, and produced accomplishments of inestimable value to sportsmen and the public generally, not only for the present but the future as well. It has resulted in the outright purchase of a half million acres of good game territory, with funds available for 75,000 acres additional; a great expansion of the system of game refuges, in both numbers and acreage, and a more thorough distribution throughout a large proportion of the State; and their development and protection to increase game and areas on which to hunt it.

The Game Commission has administered

this special fund within the Game Fund, we believe, to the best possible advantage of the sportsmen of the State. The salaries and travel expenses of all personnel of the Bureau of Refuges and Lands, including refuge keepers, were and are paid from it in addition to the lands purchased.

Many buildings comprising refuge keepers' headquarters were provided and kept in good repairs. These buildings are conservatively valued at \$174,000.

A conservative estimate places the present value of the half million acres of lands purchased at \$2,300,000. All costs incident to the purchase of lands, including examination of titles, conveying title to the Commonwealth, surveying boundary lines to determine their true location on the ground and the exact acreage of each purchase, and many maps of various kinds were paid from this fund. Overhead expense has been kept down to a minimum.

A condensed statement of expenditures from this special fund covering a period of five years, beginning June 1, 1930 and ending May 31, 1935, with averages and percentages was recently prepared and is reproduced on the next page under the caption "Expenditures for State Game Lands and Refuges." It will be noted that the actual expenditure for this five-year period was \$2,062,513.97, or an average of \$412,502.79 per year. Of this a total of \$1,384,852.92, or an average of \$276,970.58 per year, was for permanent investment or capital. This was 67.1% of the total expended. Attention is further invited to the fact that \$1,073,497.83, or 52.1% of the total expenditures, was the price actually paid for 296,881.1 acres of State Game Lands during this same five-year period.

The cost of administrative overhead amounted to \$155,396, or only 7.5% of the total, which is considered very low. However, in this connection it is worth mentioning that perhaps a fourth of this \$155,396 could logically have been considered permanent investment and charged against the purchase of lands, since the director of the Bureau and four employees devoted much of their time to acquisition activities.

In addition to the condensed statement, attention is invited to the graphic representation of expenditures for the five-year period, or "pie chart," indicated above. It tells an interesting and instructive story of accomplishments made possible by many small donations.

It is our hope that five years from now a similar statement and "pie chart" will be prepared for comparison with those herein presented. Of course, everyone realizes such figures and percentages will, if produced, be quite different. Allotments of funds for the purchase of lands are even now logically, and of necessity, being reduced to provide



EXPENDITURES FOR STATE GAME LANDS AND REFUGES  
THROUGH THE BUREAU OF REFUGES AND LANDS  
FOR THE FIVE YEAR PERIOD BEGINNING JUNE 1, 1930 AND  
ENDING MAY 31, 1935

Classifications	Total for the Five Year Period	Yearly Average	Per- centage of Total
PERMANENT INVESTMENT			
Acquisition of State Game Lands .....			
Title Abstracting and Deed Conveyancing ...	\$150,244.71	\$30,048.94	7.2
Boundary Line Surveys .....	117,748.82	23,549.76	5.7
Consideration Paid for Lands .....	1,073,497.83	214,699.57	52.1
Construction of New Buildings .....	28,465.72	5,693.14	1.4
Establishing New Refuges .....	14,895.84	2,979.17	0.7
TOTAL .....	\$1,384,852.92	\$276,970.58	67.1
MAINTENANCE OF PRIMARY REFUGES AND STATE GAME LANDS			
Salaries for Refuge Keepers .....	\$197,874.42	\$39,574.89	9.6
Travel Expenses of Refuge Keepers .....	62,712.36	12,542.48	3.0
Repairs and Improvements to Buildings .....	43,413.23	8,682.65	2.1
Boundary Lines of Refuges and Game Lands ..	42,404.37	8,480.87	2.0
Roads, grading, ditching, etc. (dirt) .....	19,274.99	3,855.00	1.0
Purchase of Horses, Forage, etc. ....			
Horses .....	1,855.00	371.00	0.5
Forage .....	6,066.73	1,213.35	
Grains for game feed ‡ .....	1,895.04	379.00	
Planting Food and Cover for Game .....	1,911.32	382.26	0.1
Equipment and Supplies .....	20,962.67	4,192.53	1.0
Motor Equipment and Maintenance .....	9,885.17	1,977.03	0.5
Fixed Charges in Lieu of Taxes .....	78,827.56	15,765.51	3.8
Miscellaneous Including Legal Services .....			
Legal Services .....	1,452.38	290.48	0.9
Miscellaneous .....	16,481.81	3,296.36	
TOTAL .....	\$505,017.05	\$101,003.41	24.5
MAINTENANCE OF AUXILIARY REFUGES *			
TOTAL .....	\$17,248.00	\$3,449.60	0.9
ADMINISTRATION OF THE BUREAU			
Salaries .....	\$119,723.23	\$23,944.67	5.8
Travel Expenses .....	10,759.25	2,151.85	0.5
Motor Equipment and Maintenance .....	12,907.81	2,581.56	0.6
Office Equipment and Maintenance .....			
Office Supplies, Posters, Printing, etc. ....	7,067.93	1,413.57	0.6
Office Equipment .....	4,333.29	866.66	
Telephone and Telegraph .....	349.88	69.97	
Postage and Express .....	254.61	50.92	
TOTAL .....	\$155,396.00	\$31,079.20	7.5
GRAND TOTAL .....	\$2,062,513.97	\$412,502.79	100.0

\* Protection against violations of law was provided largely by District Game Protectors and the expense paid from other funds.  
‡ Feed for game is ordinarily paid from other funds.

more funds for development, that is, to improve environmental conditions within refuges and public hunting lands to make them produce and support a larger game crop. To do this requires additional technically trained personnel and expenditures for labor, tools, plants, seeds and various other kinds of materials, supplies and equipment.

Then, too, it is but logical for the Commission to exert greater efforts to improve

hunting conditions in small game territory, especially farm game. The need for this is and in fact has been recognized for many years, but by what practical and economical methods has always been a problem. Now this problem is being given more serious consideration than ever before and it is hoped that something worthwhile can be worked out. But in any event the percentage of expenditures for maintenance of refuges and lands must be considerably higher than in the past.

NEW SMALL GAME PROGRAM LAUNCHED  
(Continued from Page 3)

block shall be devoted to refuges, the balance to be open to public hunting. Such units must be kept at least two miles apart.  
(b) The refuge units on each block to be appropriately posted by the Commission, also the 150-yard safety zone around all occupied dwellings and outbuildings, agents of the Commission to enforce the law on both the refuges and the safety zones.  
(c) Small refuges, wherever deemed de-

sirable, may be fenced with large mesh hog wire about five feet high to keep out stock and dogs, all the larger units where necessary to be surrounded by sufficient strands of wire to keep out cattle.  
(d) These small refuge areas to be stocked heavily as needed, food strips to be planted adjacent thereto, winter feeding and predator control to be conducted, etc. Landowners to be encouraged to improve the

game habitat in the surrounding territory, and to be employed to trap off for distribution elsewhere any surplus game that can be spared from refuge units. In some instances such cooperating landowners also may be willing to raise game under wire for the Commission. This plan provides several methods for compensating cooperating landowners and their boys for aid essential to the success of this program. It may develop processes whereby farmers may help the state to raise several times the quantity of game that can be bought or raised on the state's game farms.

It is believed this program will offer an approach to Pennsylvania's farm game problem, but until the Commission does sufficient experimental work to test the plan no one can determine what its value will be. Should it work out satisfactorily, the plan can later be extended to adjacent counties if funds permit.

4. Cooperative Farm Experimental Units: The Commission has long been urged to cooperate with groups of landowners to test the advantages and disadvantages of controlled hunting, and to determine upon the best farm game management processes, including the quantity of game that a given area of intermixed farm lands will produce, the number of hunters who can safely be accommodated on a given unit, etc.

It has been agreed to cooperate with groups of landowners to this end to locate two such experimental blocks of 2,000 to 5,000 acres each in the southeastern counties in the territory lying south of Blue Ridge Mountain and east of the Susquehanna River, and two more like units in the southwestern corner of the State, preferably in counties other than those in which the farm game refuge program above is to be launched. This is primarily a research or laboratory job, which holds great possibilities.

This brief outline will give the sportsmen of Pennsylvania a glimpse into the proposed experimental work to be undertaken immediately by the Board of Game Commissioners. It will take time and funds to determine its value, but certainly the small game hunters can no longer complain that the Commission is ignoring their plight.

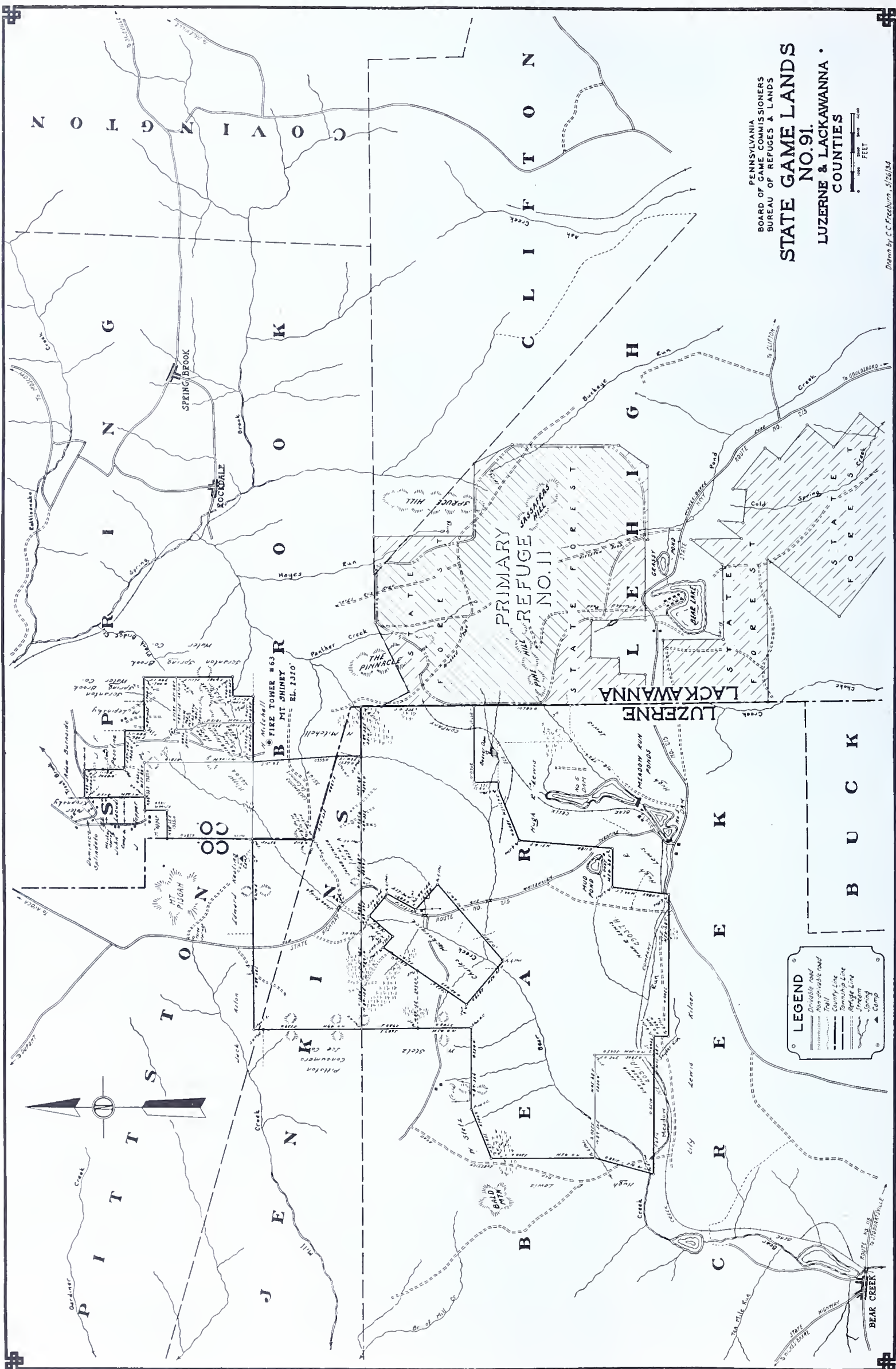
In all of these experiments the active cooperation of the organized sportsmen is essential to success, especially in the counties where they are conducted. One of the problems which concerns the Commission most is: Will the sportsmen observe the small refuge units in the same way as they always have the larger refuges?

The Commission sincerely believes they will, and that when the experimental work has been sufficiently advanced to justify it the organized sportsmen and leaders of farm groups throughout the State can help to spread the same process into every farming section of the Keystone State.

Pennsylvania's future game program must be well rounded. It must be sound and far reaching. It must give both the large game hunters and those who enjoy the pursuit of small game an even break. In its development we must plan for the next twenty years at least.

The readers of the GAME NEWS are urged to give the Commission their candid reactions to these plans, as their suggestions are always appreciated.





PENNSYLVANIA  
BOARD OF GAME COMMISSIONERS  
BUREAU OF REFUGES & LANDS

# STATE GAME LANDS NO. 91.

LUZERNE & LACKAWANNA  
COUNTIES

Drawn by C.C. Freeburn, 5/26/34



Jack Miner, Canadian Naturalist,  
feeding a pair of Whistling Swans  
on his famous sanctuary.



species it is very easy to see that it has been the work of man that has developed the different breeds—Leghorns, Brahms, Minorcas, Plymouth Rocks, and so on—some of which are especially valuable as layers, and others as food. Our much-prized turkey is nothing more nor less than the wild turkey, domesticated and improved.

Seventy-five years ago our Canadian north-west was grazed by millions of wild buffalo (bison). Then came the white man who, realizing the value of the fertile soil, established a park where a herd was placed to preserve the species from extinction, slaughtered the great roaming herds and, turning the land upside-down, made it into one of the largest and most valuable of earth's great wheat-fields, with towns and cities and stately governmental buildings dotted here and there across its vast expanse. Remember, though, that in order to bring about this state of things, man had to "interfere with Nature" as some would call it.

And speaking of wheat-fields, wheat has been man's favorite food for centuries. Yet wheat, even as it was being grown in Canada in comparatively recent years, had certain weaknesses—it had to be planted in the fall and did not always survive the severity of the western winter; it was not producing as abundantly as seemed desirable; it did not mature rapidly enough always to escape the early Autumn frosts. Then came to our aid such men as Professor Charles Saunders, cerealist, of Ottawa, and by study, experimentation and the rigid selection of choice grains, developed a wheat that could be planted in the spring, that would yield several bushels more per acre than had been the rule previously, that would mature within a certain period of time, and that yet retained all its former

# Assisting Nature

By JACK MINER

**D**URING the past year I have read a number of articles, both in magazines and newspapers, as well as many letters that have come to me, on the subject of "Nature's Balance," decrying actions or systems on the part of man which the writers described as "interfering with Nature," "upsetting Nature's balance," and so on.

To all who adopt that attitude I should like to put myself on record to the effect that, personally, I believe the so-called "balancing" of Nature was left entirely with man, and that I believe in assisting Nature for the benefit of humanity. God created everything—every *thing*—and then He created man "in His own likeness and gave him dominion over all;" that is, as I understand it, the power and authority to manage everything here on earth.

Look, for instance, at the animal world, with the livestock in the farmer's barnyard as example. Did God create the Jersey cow, and the Holstein, and the Hereford? No. He gave man the original stock and then God, through man's instrumentality, developed many breeds, some for the high

cream content of their milk, some to produce the greatest quantity of milk, and some as the best beef cattle. All have been on the earth a long time, of course; but their differences are the result of man's management. And, remember, man had to interfere with Nature to develop them.

Much the same thing is true of the horse, different strains being cultivated for particular purposes, such as the Clydesdales and Percherons for heavy draught work, and the blue-blooded descendants of original Arab stock for racing.

Recently I was in some of the southern United States, where the character of the farm work to be done is too heavy for the common ass, yet where the climate is too warm to permit of the horse doing its best. In that part of the continent, therefore, man has crossed the ass with our common horse and produced a beast that withstands the heat and is also strong enough to do the work of tilling the soil. Yes, he has developed the mule. But the mule kicked and, so far as I know, has gone no further.

In poultry, if you trace back the various

qualities. We have today the Marquis and the Garnet and other species of spring wheat, developed by man. God created the original, the germ; but man was given—and has used—the power to develop, manage and control it.

Or if you will consider your flower garden, look at the Iris. God gave to us in America a little, insignificant flower growing along the banks of streams, which we called, commonly, the "flag." From it man has developed Irises that grow three or four feet in height, varied in color, and some giving out an exquisite fragrance. But man had to interfere with Nature to accomplish this. Or take the rose. Did God create the American Beauty rose? No. He gave man brains, and a little old wild rose which served as the germ, so to speak. Today, through the efforts of outstanding botanists, man has been given flowers of beauty and fragrance, as the Creator intended should be done.

But let us look at another side to the question. At the same time that God created

(Continued on Page 24)





Sportsmen of Lancaster County Sowing Grain for Game Food. Other Clubs Throughout the State Also Are Conducting Planting Programs.

## CURRENT TOPICS

### FLOODS SAVED BEAVERS FEW SKUNKS TAKEN

Trappers were able to make a fairly good catch of beavers despite the recent heavy floods and reports from all but a few District Game Protectors show that over 2000 of these little dam builders were captured during the last two weeks of March.

It is true the heavy snows and subsequent floods made trapping rather difficult and many of the dams were washed out entirely. However, the industrious creatures have started rebuilding their homes, and later the Commission will no doubt be called upon to remove some of those animals which are flooding roads, damming mill races and otherwise causing trouble.

Unless more complete reports greatly swell the figures of the catch this year, the Board will undoubtedly be compelled to declare another open season next spring.

The weatherman was kind also to that lowly, yet valuable, furbearer, the skunk, according to preliminary estimates submitted by the field agents of the Game Commission. While the Commission extended the season to cover the month of March in order to have some of the surplus animals removed, trapping conditions were very unfavorable and few skunks were captured. However, it is estimated that in the lowlands hundreds of skunks were drowned by floods.

Low prices for furs also deterred trappers from operating extensive trap lines, and skunks have become so abundant that hundreds of communities are begging for relief from these self-reliant fur-bearers.

These good people have the simplest remedy of all right in their own hands if they will but use it. If they will but stop attracting skunks to their doors by carelessness with garbage and other offal the invading "gas tank" carriers will quickly desert back porches and woodsheds for adjacent forests and fields.

The moral is: "Take care of your refuse in a civilized way if you don't want skunks at your kitchen doors."

During the Easter holidays a request came to the Game Commission for rabbit eggs. It was explained to the applicant that Pheasant eggs would be forwarded instead.

### DO NOT PICK UP YOUNG DEER OR BEARS

Do not pick up "lost" fawns or bear cubs. These young creatures usually are not lost or deserted. Their parents are simply frightened away by someone's approach and will readily return to their offspring after the invader leaves the vicinity.

It is a violation of the game law to retain any protected birds or animals in captivity, and the Game Commission maintains a strict policy regarding the taking home of very young birds or animals. Such creatures are rarely desirable for restocking purposes, even if they survive.

The Board recognizes that in most cases people feel they are doing a kind act, but the truth of the matter is they are working against the future welfare of the creatures themselves.

Unless it is definitely known that the parents have been burned in forest fires, or killed in some other manner, *do not molest the young of wildlife*. If the parents are dead, however, then notify the nearest Game Protector and he will immediately see that the young are given a good home at one of the Commission's numerous game refuges.

**Pied-billed Grebe in washbowl at Game Commission. It was found in an exhausted condition in a field near Harrisburg.**



### WHAT OTHERS THINK ABOUT THE TRAINING SCHOOL

"I think this is very fine constructive work, and should place your personnel problem on a higher plane than is possible under some other methods."—C. F. Thompson, Director, Illinois Dept. of Conservation.

"This is a matter of genuine interest to this Department."—W. Osgood, Acting Secretary, Michigan Department of Conservation.

"We will certainly look over with a great deal of interest your plan for a training school."—W. C. Adams, Director, New York Conservation Dept.

"During the past two years, in the preparation of this Department's employees written examination, we have had the benefit of questions used by the States of Wisconsin, Pennsylvania, Maryland, and Michigan, and they have proven wonderfully helpful to us. The material which you enclosed offers further suggestions."—O. H. Johnson, Director, South Dakota Game and Fish Commission.

"I was most interested to receive your letter of the 25th enclosing your plan of securing capable men for the duties of wildlife administration. It is certainly a very complete set-up, and one which I believe should result in much greater efficiency than the methods now in use in many states."—R. G. Parvin, Game and Fish Commissioner, Denver, Colorado.

"I have read with interest the plan you have inaugurated for the selection of your staff, and I believe it will do much to assure you of having competent men on your force."—A. I. Peterson, Game and Fish Commissioner, North Dakota.

Refuge Keeper Hugh Baker reported that on March 28 he found a great horned owl's nest. He went home, got his gun and killed the owl. As he shot it a young one fell from the nest. It was covered with white down and Baker estimated that it weighed about a pound and a half. In the nest he found the heads of four rabbits, also the hind quarters of three rabbits that had been killed only a short time before. Under the nest were parts of rabbits, squirrels, chickens and some bones that he could not identify.



## WARNING TO MOTORISTS

The Commission believes that automobiles are responsible for the death of more valuable wild creatures in some sections of the state than the hunters. The amount of money necessary to replace the birds and animals so killed, if it could be computed on a logical basis, would run into hundreds of thousands of dollars annually.

Drive carefully, especially through large game territory. Hundreds of deer have been killed on the highways in the northern part of the state, and many automobiles have been badly wrecked, causing death in some instances and injury in others to their occupants.

*Only recently two youths were killed and a girl companion seriously injured when their car overturned as the driver swerved to keep from hitting a deer on the Danville-Elysburg highway.*

Lights are blinding to animals on the highways, and rabbits and other small game are often confused by the powerful glare and run down by oncoming cars. Motorists are urged to slow down and dim their lights when they see wild creatures on the highways.

## PRACTICE OF IMPROPERLY CAGING ANIMALS FROWNED UPON

The Game Commission instructed its field agents to make a thorough check of all individuals holding bears and other wild animals and birds in captivity to determine just how humanely these creatures are being housed and fed, and whether or not the public is sufficiently protected from injury by any of them.

There have been numerous instances where children have been injured, sometimes fatally, by enraged bears which have broken loose, their collars having been worn almost to shreds by the constant pressure exerted on them. In many cases these animals have not even been kept in suitable cages, but were tethered to poles out in the hot sun, an inhuman and dangerous practice, indeed.

Where animals are held under ideal conditions, and where the public cannot approach too closely to feed the creatures, there is comparatively little sentiment against their retention. On the other hand, poorly equipped cages without shade or protection, and without ample provisions for safeguarding the public, are a menace, and the Game Commission does not propose to tolerate continuance of such practices.

Local sentiment, as expressed by Division Game Supervisors who met in Harrisburg recently, leaves no doubt that the public is unalterably opposed to the improper housing of wild creatures and will cooperate in putting a stop to it wherever it is abused.

## CONTROL THE CROW

Harrisburg, Pa.—May is an excellent time to control the crow, and sportsmen's associations should plan active campaigns to remove these birds in sections where they are too plentiful. They are a very serious menace to game and song birds during the nesting season, and for that reason should be hunted more assiduously than at any other time. Young crows in the nest demand a lot of food, and our valuable wildlife suffers greatly during that period.

The Game Commission urges all sportsmen's associations to make crow control a definite part of their spring programs.



Commission Employee Offers Green Food to Small Fawn.



Officers Carry Exhausted Deer to Refuge Headquarters to Be Given Food and Shelter.



Game Officials Apply Splint to Broken Leg of Yearling Doe.





Philadelphia Inquirer.

One of the hundreds of half wild dogs killed by game officials, dog law enforcement officers and sportsmen during the past winter. The bold creatures killed many deer.

### FIELD NOTES

Refuge Keeper William Lane in his weekly report of February 16th, states: "A ringnecked pheasant cock bird came into a Mr. Brumbaugh's barnyard for feed. The bird had such a load of ice on its back that it staggered when walking."

By transferring rabbits to clean crates every day or two and using a fresh bedding of alfalfa hay and a mixed diet of apples, lettuce, carrots, turnips, cabbage, etc., Traveling Game Protector Robert D. Reed, of Berks County, managed to hold over all shipments which arrived during the heavy snow of the past winter.

Citizens of Abington, Pa., struck upon a good plan to rid the community of skunks when they routed seven of the animals by the use of fear gas.

W. F. Simrell of Hallstead, former head of the Bureau of Vermin Control writes: "While the recent flood did no particular damage in this section there was one amusing incident."

"A man living on the flat land had the water about two feet deep in his house. He waded in and opened the kitchen door and a 3 lb. pickerel swam in—Disposition of same—unknown."

"Believe it or not" as Ripley says.

(Continued on Page 19)

### WARREN F. EATON 1901-1936

Warren Francis Eaton pioneered in dramatizing the plight of our Hawks and Owls, and who hesitated not a moment in rushing to the aid of these persecuted species of wild life, will be greatly missed by conservationists the country over. The volume of his activity and the intensiveness of his energy were such that in the space of a few short years the impact of his thought was noticeable throughout the United States.

His death, on February 16, 1936, from complications following an appendix operation, was not only a tragic blow to his wife and small daughter but also to the National Association of Audubon Societies and to the cause of conservation of wildlife.

He took a leading part in organizing the Hawk and Owl Society, of which, to use a homely expression, he was "The works." He carried on, after business hours, at his home in Upper Montclair, N. J., a voluminous correspondence with people all over the United States, both those who likewise wish to bring about a better understanding of the predatory species, and those who publicly assert that these "vermin" are the worst enemies of game.

Warren F. Eaton will live on in the minds and activities of all who knew him and loved him so much.

4-H clubs are symbolic of Home, Heart, Head and Hand.

### DEER KILLING DOGS

Although hundreds of dogs, most of them unlicensed, were killed chasing deer and other game during the past few months, this menace is by no means ended, and the Game Commission expects to wage an unrelenting campaign against these killers. Furthermore, a warning is being given to all dog owners that they will be fined if their dogs are permitted to chase game.

The individual, rather than the dog, is to blame, and if dogs are not tied up as they should be during the breeding season they are apt to follow their natural instincts and chase or kill many nesting game birds and animals. All good sportsmen obey this law strictly, and while there are cases where a dog is likely to slip his collar or break out of his kennel and play havoc before the owner knows about it, such instances are rare.

It is not the Game Commission's purpose to persecute anyone, but those who deliberately or carelessly let their dogs run at large at this season will be prosecuted to the full extent of the law.

Such dogs should be controlled not alone because they are chasing game, but because they are likely to transmit the dread canine disease rabies into a community where this infestation is not now prevalent. All field officers of the Game Commission are co-operating with the Department of Agriculture to curb this menace and to restrict it as much as possible.

### FILM LIBRARY EXHAUSTED

No more 16mm films will be available for distribution until August or September, when a complete new series will have been prepared. There is a limited number of 35mm subjects for distribution to those who have or can secure that size projector, however.

### EDUCATIONAL FILMS

After an extensive study the American Council on Education, 744 Jackson Place, Washington, D. C., has recommended the creation of an American Film Institute as a means of coordinating material and advancing visual education. In connection with this the Council wishes to reach all persons owning motion pictures and allied visual and auditory aids to education. Space does not permit our going into detail relative to the study preliminary to this program, but full information may be obtained at the above address.

### SPECIAL LICENSES ISSUED

The following special licenses have been issued from June 1, 1935 to March 31, 1936:

Taxidermy .....	229
Ferret Owner's .....	71
Ferret Breeder's .....	1
Propagating .....	348
Collecting .....	19
Fur Dealer's (\$5.00) .....	203
Fur Dealer's (\$10.00) .....	289
Fur Dealer's (\$50.00) .....	15
Fur Farming .....	48
Field Trials .....	21

Both a police dog and a deer lost their lives in the swift current on the Hauto Dam, Luzerne County recently.



## EXCERPTS FROM SPEECHES OF PROMINENT CONSERVA- TIONISTS

"More and more conservationists are beginning to talk in terms of game management. It is one of the youngest of the sciences. It is at least 25 years behind forestry which, so far as this country is concerned, became a science only during the present century.

"We should no longer depend solely upon an attitude of self-restraint in the amount of fish or game we take. Scientific investigation is of greater significance than laws; the technician has become more important than the game warden."—Lithgow Osborne, Conservation Commissioner of the State of New York.

## FIELD NOTES

(Continued from Page 18)

W. B. McClarin, traveling game protector, Ebensburg, has been named boy scout field commissioner of Cambria County.

Ray McKissick, Game Protector of Westmoreland County, reported finding seven squirrels beneath a nest-tree one morning, the tails of which were all entwined with twigs, etc. When he picked up one, he picked up the whole seven. It had rained during the evening, becoming colder toward morning, and ice formed on the animals to become so uncomfortable they twisted about until their tails became entwined. They upset the nest and fell to the ground where they were found frozen to death.

Frank Myers, Division Game Supervisor, found a turkey gobbler which was so caked with ice that it fell off a tree and froze to death. It got up on its roost all right, but it rained during the night and later sleeted as the weather turned to zero.

George H. Hartman, a retired farmer and school teacher, has been chosen president of the York and Adams County Game and Fish Association. The club held a very enthusiastic meeting in April.

W. R. Daugherty, Mahaffey, Clearfield County, at the age of 8 years began to design bird boxes and at the age of 58 he is still making them. He says he has a particularly clever bird box that 4-H boys and girls, boy scouts, bird and nature clubs might be interested in.

Lovers of ground nesting birds who have been contacting their rural friends urging them not to burn off the grass fields during the nesting season have been getting splendid results.

They're now calling crows "Black Partidges." At a recent roast crow dinner held by the American Legion, Madison Hotel, Wisconsin, sportsmen enjoyed such a feast, one bird for every soldier.

Members of Sportsmen's Association with Banded Crows to be used in Crow Control Contest.

Williamsport Grit.

## SPORTS WRITER ILL

(Says Deer Eat Mentholum)

Paul Brown, well known sports writer from Pottstown, Pennsylvania, has gone to Colorado for his health. Many sportsmen who know him may be interested in dropping him a line at the Winbro Apartments, 1620 Grant Street, Denver, Colorado.

In a letter the Editor received from him recently he says:

"By the way, I encountered a most amusing and to me, unusual, fact out here. It is that the Colorado deer like to eat mentholatum! I have a friend who left a jar of the stuff unopened one night up in Rocky Mountain National Park, and the following morning the jar was empty. A watch was kept to see what would empty a second jar, and the deer were caught doing it. Did you ever hear the same thing about the deer in Pennsylvania?"

## NEW BOOKS AND PAPERS

*Wildlife—An Important Forest Product* was the title of a paper prepared and read by James N. Morton at the recent meeting of the Pennsylvania State Forestry Association. It was also published in the *Journal of Forestry*, and will appear in the June issue of the GAME NEWS.

The General Wildlife Federation, a temporary organization with headquarters at the Investment Building, Washington, D. C., just released an interesting little booklet suggesting plans and information for us in the formation of county and state wildlife federations.

A man lost a valuable dog and advertised in a newspaper, offering \$500 for it, but upon getting no reply he called at the office. "I want to see the advertising manager," he said.

"He's out," said the office boy.

"Well, then his Assistant."

"He's out also, sir."

"Well, then I would like to talk to the Editor."

"Sorry, but he's also out."

"Great Scott," the man said, "is everybody out?"

"Yes," said the office boy, "they are all out hunting your dog."

—Pearsons.

## ORGANIZE MORE CLUBS

Is your club active or is it dying a natural death? The life of any organization is gauged by its activities. Interest begins to wane when the officers cease to function. New ideas must be advocated and they should not be too antiquated. A change in officers sometimes stimulates an organization which is going stale.

Sportsmen's organizations must have their social functions, of course, but their real purposes are wildlife conservation, prevention of forest fires and purification of streams.

Today Pennsylvania has about 750 sportsmen's organizations, many of them affiliated with the State Federation of Sportsmen's Clubs, a state-wide body which is functioning admirably, and of which every club should be a member.

Many towns and even some cities in this Commonwealth are without sportsmen's organizations simply because of lack of interest on the part of the fishermen and hunters. What Pennsylvania needs is more sportsmen's organizations. In union there is strength.

It's a simple matter for a locality to have a sportsmen's organization. The hunters and fishermen of any community can be called together, formally organized and members enrolled.

It is not implied that those who are not affiliated with some conservation body are not sportsmen, but it must be admitted that those who are identified with an organization are more familiar with game, fish and forestry regulations than those who are not.

Some clubs, especially those with large memberships, maintain interest through straight trap shooting, skeet, rifle, revolver and archery matches. Clubs without an extensive membership, however, have practically abandoned straight trap shooting and have taken up skeet which is more economic.

Active clubs in Pennsylvania also feature their activities with annual field trials which attract thousands of sportsmen and where good fellowship is the password. At these gatherings men of every walk of life rub shoulders and a much better understanding of each other and of the great out-of-doors exists.







Allentown Morning Call.

In appreciation of the fifteen years of his service as secretary of the Lehigh County Fish and Game Protective association, George Zimmerman, is awarded a gold watch chain, knife and crystal charm by Seth Gordon, executive secretary of the Game Commission. The award was made by Mr. Gordon on behalf of the members of the association. On the picture: Joseph Mellon, state fish warden; Milo M. Miller, treasurer of the association; George Zimmerman, Charles W. Wessell, chief of the division of propagation and state game farms; Seth Gordon, executive secretary of the State Game Commission; and Robert I. Plarr, president of the Lehigh County Fish and Game protective association.

## CLUB HOLDS BUFFALO DINNER

A buffalo dinner attracted upwards of four hundred persons to a roundup of the Lancaster County Game and Fish Protective Association recently. One of the features was the showing of a reel of motion pictures in which officers of the club participated in the round-up of the buffalo on the estate of the late General Trexler, Lehigh County. The speakers were Hon. Daniel Schnable, member of the Fish Commission, Norman Wood, Game Commission, District Game Protector John Haverstick, Lancaster County, Fish Warden Horace Pyle, and District Game Protector Harry Rickert, Lehigh County.

The affair took place in the P. O. S. of A. Hall, Lancaster and the dinner, prepared by a group of ladies from the Y. W. C. A., was most excellent.

## NEW CLUBS

The Greenwood Fish and Game Club recently organized with Mr. Lloyd Johnson, Bells Landing, President and Walter Johnston, also of Bells Landing Secretary.

Richeyville Rod and Gun Club. Harold Baker, Secretary, Richeyville, Pa.

West Pike Run Sportsmen's Association. Ed. Wells, Secretary, Daisytown, Pa.

In a letter to Clarence Gottman, of the Biological Survey, Washington, D. C., G. I. Crawford of Boulder, Colorado, cites a specific instance of the crow feasts now in vogue in that part of the country. He says: "I feel if more efforts can be exerted, showing sportsmen the crow is really good to eat, the problem will be solved in finding a method to control these birds. If all interested game lovers felt as I do about the crow as food, it wouldn't be long until the crow menace would be under control."

## FORM JUNIOR CLUB

The Presque Isle Sportsman's League's plan for a junior organization has been given the unqualified endorsement of the Erie County Boy Scout organization.

John L. Taylor, Scout Executive, in an interview on one of the League's radio programs, commended the League for its interest in the boys between the ages of 12 and 18 years, and suggested that whole Scout troops be taken into the junior organization as units.

The League has been given permission by the County Commissioners of Erie County to use land which the county has taken for non-payment of taxes. These areas will be used for planting shrubs, trees, and food for game. The League also is contacting farmers throughout the County, seeking permission to use land which the farmers are not utilizing.

## OUTDOOR ETHICS CODE

By SETH GORDON

1. Your outdoor manners tell the world what you are when at home.
2. What belongs to the public isn't your own—play fair.
3. Respect the property of rural residents—ask before using it.
4. Save fences, close gates and bars, go around planted fields.
5. Do your shooting only where absolutely safe—see clearly before pulling the trigger.
6. Respect the law—take enough legal fish and game to eat, then quit.
7. Protect public health—keep springs and streams clean.
8. Clean up your camp and don't litter the highways with trash.
9. Carelessness with fires is a crime against humanity—prevent them.
10. Leave flowers and shrubs for others to enjoy—help keep outdoor America beautiful.

# HERE AN

## LEHIGH COUNTY SPORTSMAN HONORED—PRESENTED GIFTS

In recognition of his fifteenth year of service as secretary of the Lehigh County Fish and Game Association, George Zimmerman, Allentown, whose efforts have been untiring in game and fish restoration in that county, was presented with a gold watch and chain in the presence of upwards of seven hundred hunters and fishermen. The presentation address was made by Seth Gordon, executive secretary of the Game Commission. Mr. Gordon paid a well-deserved tribute to Mr. Zimmerman and outlined some of the future policies of the Game Commission. Other speakers were Charles W. Wessell, chief of the Bureau of Propagation and Game Farms, and State Fish Warden Joseph Mellon.

The gathering took place at Dorney's Park, and Robert L. Plarr, the president of the association, ably presided.

A report of a vermin control contest was announced as follows: Casualties, 1053 crows, 30 stray house cats, 23 unprotected hawks, 370 starlings and 14 weasels. William Moyer, Macungie, was awarded the first prize of \$25.00; Chester A. Guth, Wescoesville, second, \$10.00; Michael Todd, Gutchville, third, \$5.00; fourth, Joseph Gehris, Allentown, hunting coat; fifth, Alexander Scott, Allentown, pair of hunting shoes; sixth, Lester Rehrig, Germansville, net; seventh, Howard Delong, Saesgersville, rod; eighth, Frank Yoe, Coplay, reel.

## COMMISSIONER LAMBERTON GIVES ADDRESS

Hon. Robert G. Lamberton, member of the Game Commission from Franklin, gave the principal address at Meadville on March 25 when more than 600 members of the Crawford County branch, Pennsylvania Sportsman's Council, held their annual meeting in the State Armory.

Fish Commissioner Charles French, of Ellwood City, also spoke, as did others, including Crawford County Game Protector Ward Donor and Pymatuning Refuge Keeper, Burt L. Oudette.

Emmett A. Williams, of Meadville, was elected President of the branch, Theodore Bartholomew, of Titusville, vice-President, John Tracy, Secretary, Charles Heckman, Treasurer, and Wallace Dean, Divisional Director, all of Meadville.

The branch had more than 2,000 members during the 1935-36 fiscal year and has 1,000 already signed up for the new year which began April 1.

## PROTECTION PLUS

A defendant in Louisiana, charged with selling woodcock, was sentenced to 60 days in jail, and an additional 1-day jail sentence was suspended. Charged with the same offense, 4 other men were sentenced to 30 days in jail. A housewife was placed on probation for 5 years. For selling snipe, a night club operator was sentenced to 30 days in jail. Another defendant received the same sentence for possessing coots in close season.



# HERE WITH THE SPORTSMEN

## ANNUAL TAKE

# WITH THE CLUBS

The cash, or trade, value of Alaska's wildlife "on the hoof" so to speak has, after considerable study of the matter, been announced by H. W. Terhune, Executive Officer of the Alaska Game Commission, as being approximately \$93,000,000.00. The take, or "Crop," of these species over a long period of time averages about \$3,360,000.00 a year, which in turn represents an annual interest on the principal of about .0347 per cent. Unlike mineral deposits which once exploited are gone forever, the fur and game furnish an annual crop upon which there is a complete cash "turn-over" every 25 or 30 years. Hence, the primary importance of maintaining this principal asset at its highest reasonable level of abundance.



WILLIAM "BILLY" ANNEMAN

A splendid ovation was given to William Anneman by Lackawanna County sportsmen at their annual meeting recently for his many years of faithful service as a guardian of the State's wildlife. During the emergency game feeding program, he acted as an observer on eight airplane flights, picking out strategic locations for dropping food. The pilot said that Mr. Anneman was the best observer and guide he ever had up in a plane and that it was amazing the manner in which he was able to pick out the different swamps, ravines, ridges, etc. Approximately 3500 lbs. of whole corn were dropped.

Mr. Anneman is sixty-eight years old, having been a game protector for twenty-two years. He was first appointed from a public platform on Courthouse Square, Scranton, July, 1913 by Dr. Kalbfus, first secretary of the Board. Billy Anneman is one of the old warriors who helped pass the resident hunters' license law in 1913. He organized twenty-five sportsmen's associations in his section of the State, among them the first foreign speaking group in Pennsylvania. He is a member of the United Sportsmen of Pennsylvania.

If sportsmen's associations would limit their programs at banquets and smokers, and not have so much entertainment at one time, everybody would enjoy themselves more. Crowding too much in one program spoils it. Save something for another day.

The Central Conservation Club of the Central Junior High School in Allentown recently conducted, before their double assembly of over 1,500 pupils, an appropriate program reviewing the idealistic principles for which this junior organization stands.

Prior to the showing of motion pictures Norman M. Wood, Game Commission lecturer, presented two one year subscriptions to the GAME NEWS to Thomas Masters and Merritt Yorgey for their outstanding feeding activities during the past winter.

At the annual meeting of Crawford County Branch, Pennsylvania Sportsmen's Council, held in Meadville, during March, the following officers were elected: Emmett Williams, President, Meadville; Theodore Bartholomew, Vice-President, Titusville; Charles Heckman, Treasurer; John Tracy, Secretary; and Wallace Dean, Director, all of Meadville.

The Chester County Rod and Gun Club, headquarters at Thorndale, has started a financial drive to liquidate its debt on the

grounds and buildings and many persons interested in game, fish and forestry activities, in which the association has taken an active part for the past twenty-five years, have forwarded their checks.

The Steelstown Gunning Club of Annville deserves much credit for the work it carried on since its organization September last. Aside from a fine program of winter feeding, the club accounted for 57 crows, 6 stray cats, 6 weasels, 29 skunks, 10 opossums and 4 unprotected hawks.

The Old Town Sportsmen's Association of Clearfield held a very interesting meeting recently, at which time they decided to establish a small bore rifle and pistol range and a straight trap shooting field.

Last month the Perkiomen Valley Sportsmen's Association of Schwenkville, Montgomery County, held a Farmer-Sportsmen meeting which added further to the goodwill enjoyed by those two groups.

The Association is sponsoring a Vermin Contest which started January 1 and closes November 30, 1936. The contest is open to all Junior and Senior members in good standing to whom valuable prizes will be awarded.

### WORLD'S RECORD RIFLE TEAM

Score 968 out of a possible 1,000, shot Jan. 8, 1936 by the Small Bore Rifle Team of the South Hills Sportsmen's Association, Pittsburgh, Pa., at their new club house on Brownsville Road. This exceptional score was made shooting in match competition, four positions: off-hand, kneeling, sitting and prone. Front row, left to right: Edward Gaub, C. O. Futerer, Art Mondsheim. Rear row, left to right: Dan Hoffman, captain, A. J. Huebner, Thomas Snee, Ward W. Wasson, vice president of the Association.







#### CROWS A La COLORADO

Above is a photo showing 150 crows served at a banquet of sportsmen at Boulder, Colorado. We are indebted to G. I. Crawford of Boulder for this unusual picture.

How to Prepare: Pick, wash, salt and leave stand over night. Next morning drain and wash again. Stuff or not as you choose. Bake two to four hours with plenty of water, depending upon the age of the crow. A fat crow is usually an older bird. Crows can also be fried.



The above is a picture of some of the superintendents and foremen of the United Natural Gas Company, the Sylvania Corporation, the St. Marys Natural Gas Company and the Ridgway Natural Gas Company, who supervise about 300 men working daily over portions of McKean, Elk, Potter, Venango, Clarion, Jefferson, Forest, Mercer, Armstrong, Cameron, and Butler Counties. These foremen and the field men and well tenders, working under their supervision put on a very active winter feeding campaign, thereby saving much game.

#### HOLD LARGE FIELD TRIALS FOR SPRINGERS

The Valley Forge English Springer Spaniel Club held a field trial recently, the winners of which are as follows:

##### Junior Springer Stake

1. Joseph G. Carpenter's Rex of Ruffdale.
2. Sidney Jenkins' Playmate.
3. Mrs. Robert Jeffry's Just Me Marco Polo of Ruffdale.

##### Senior Springer Stake

1. Buell Hollister's Queen's Fearnot Rouge.
2. Fred Ewald's Prince.
3. Mrs. Howard Klenk's Janice of Jumping Brook.

##### Junior Cocker Stake

1. Mrs. Lewis' Rufus Rastus of Sugartown.
2. Jumping Brook Kennels Jewette of Jumping Brook.

##### Senior Cocker Stake

1. John F. Reich's Highbury Cock Robin.
2. Henry L. Ferguson's Flea of Falcon Hill.
3. Robert Valentine's Bouncing Black Boy.

Fred Ewald's Prince won the special prize of \$50.00 for the best member puppy.

#### JUNIOR WALTONIANS LAND CONSERVATION AWARD

On March 24th, the Upper Darby High School staged a "Hobbies Show," open to a varied line of exhibits from postage stamps to mechanical appliances—Junior Waltonians saw in this show an opportunity to preach the doctrine of conservation, and arranged a display of live and mounted specimens of game and fish. A varied assortment of bird feeding stations and shelters was included, together with bird-houses, arms, ammunition and fishing equipment. Placards demanding conservation, restoration, reforestation and water purification formed an appropriate background. A feature placard stated "MAN ALONE IS THE CONTAMINATOR," while the League's conservation platform received a conspicuous position.

Members of Delaware County's Junior Chapter were in attendance, dressed in outdoor togs, emblazoned with hunting and fishing licenses. When the judges had completed their work, the coveted blue ribbon hung over this exhibit, which acted as a constant magnet to the large crowd which poured into the building all evening.

Hats off to the Delaware County's Junior Waltonians, and especially to President Edward Watts, Vice-President Blair Kennerley and Secretary Harry Houch. These lads have a true grounding in conservation, and are destined to spread these doctrines among their associates. *P. G. Platt.*

They ate crow and liked it at the annual banquet of the Lancaster County Sportsmen's Association held in that city recently. The eats committee which comprised H. E. Harsh, president, William Rudy, secretary, J. Arthur Norris, R. S. Sullenberger, Milton Dietrich, and Harvey Specht prepared the crow in all styles. At this same meeting an extensive food planting program was arranged.





## ON THE FIRING LINE WITH TRAP AND SKEET

### DATES SET FOR STATE SHOOT

Thursday, Friday, Saturday, June 11th, 12th and 13th, are the official dates set for the annual Pennsylvania State Trapshooting Tournament, this year to be held over the Bradford, McKean County, Pa., traps. The committee will shortly issue the program. John Schroll, secretary of the state association. Mt. Joy, and other members of the committee, are now preparing for the gathering of clay target marksmen and some of the best wing shots in the world will attend the classic, which this year promises to be the best ever held in the history of the State. Charles Newcombe, Philadelphia, J. B. Eshleman, Lancaster, George D. Baldwin, West Chester, and other outstanding shooters are cooperating with the committee. Bradford folks are also planning to entertain the visitors in fine style.

### TRAP SHOOTERS ORGANIZE

A series of four trap shooting matches between Chester and Delaware Counties has been arranged. The first shoot took place over the Delaware County Sportsmen's Association traps, near Lima. Sunday afternoon, May 10th and a big field of clay target busters were out. The next meet takes place over the Chester County Club's traps at Thorndale, Sunday afternoon, June 21st.

The matches are for the championship and to say that keen interest is manifested is putting it mildly. The Delaware County boys sent out notices to their shooters "Beat the Quakers" and the Chester County marksmen used the slogan "Down Delaware County." At each match there are two events of 25 clays. The program has been so arranged that any class shooter can participate and the entrance fee has been placed at \$1.50 for each shoot.

Those named on the committee: Chester County—H. M. Zook, Charles Mason, George D. Baldwin, Albert Penrose, George Gale, John Baldwin, Dr. Frank Hanna, W. C. Custer, William Worrall, representing West Chester, Coatesville, Longwood, Kennett Square, Oxford, Atglen, Spring City and Pottstown.

Delaware County:—Gordon MacDonald, Grosby Black, and John A. Poulson, Chester. Trap shooters from all the clubs in Delaware and Chester Counties have been asked to participate. At the end of the four shoots, two of the dates yet to be named, a useful trophy will be awarded to the team winning the championship. The seven high men will constitute the team at each shoot.

### SHOOT SCHEDULE

June 6th, Roxborough Gun Club, Roxboro.  
June 27th, Quaker City Gun Club, Philadelphia.  
June 28th, Northeastern Trap Shooting Association, Scranton, Pa.  
June 28th, Boyertown Rod and Gun Club, Boyertown, Pa.  
July 4th, York County Gun Club, York, Pa., and Roxborough Gun Club, Roxboro.  
August 1st, Roxboro Gun Club, Roxboro.  
August 29th, Quaker City Gun Club, Philadelphia.  
September 7th, Roxboro Gun Club, Roxboro.  
September 20th, Northeastern Trap Shooting Association, Scranton.  
September 26th, Quaker City Gun Club, Philadelphia.  
October 11th, South Eden Gun Club, Lorraine, Reading, Pa.  
October 12th, York County Gun Club, York, Pa.

The Northeastern Trap Shooting Association, Scranton, will start its initial registered shoot off with a big "bang" May 17th. The new grounds are near the Shultzville Airport. Louis J. Neiger is president of the newly organized club. Other shoots will be held June, July, August and September.

Registered tournaments will be held over the Quaker City Gun Club, Philadelphia, and Daddy's Play Grounds, Maytown, Pa., on May 30th.

The Keystone Setter and Pointer Club, Laureldale, Pa., trapped many coveys of quail last winter and held them in specially constructed pens until weather conditions were suitable to release them.

## NATIONAL WATERFOWL REFUGE CONTEST

Sportsmen this year have another opportunity to learn how to boost local wild duck populations—with all the necessary "how to" information available for the asking and with national recognition, cash and silver cup awards for their efforts. The More Game Birds Foundation announces that its National Waterfowl Refuge Contest, which last year resulted in starting 237 duck refuges by sportsmen and others, including six in Pennsylvania, will be repeated.

Forty-four states were represented in the 1935 contest, it was announced at the Washington Wildlife Conference by Jay N. ("Ding") Darling, who headed the Committee of Judges. The first five place winners were awarded \$500.00 in cash, silver cups and certificates of merit illustrated by "Ding." Fifteen other refuge sponsors also received cups and certificates, and 43 additional certificates were awarded. Similar prizes are offered in the 1936 contest.

Rules of the contest, in brief, are: Notice of entry must be given by June 15 to qualify for one of the first 20 prizes. The refuge must be a new project started this year. Food, cover, decoys, upkeep, protection and means employed in development of the site figure in the final rating. Judging is based upon attested reports, photographs and maps submitted.

To qualify for prize awards, refuges are required to have a permanent water area of not less than three acres, an acre of each of natural food plants and cover, three pairs of decoys, protection from shooting and predators, and permanency of at least three years.

Three free booklets are offered showing how to start and manage a refuge. These and copies of the conditions and rules of the contest, entry blanks and other contest material may be obtained free of charge by addressing More Game Birds in America, 500 Fifth Avenue, New York, N. Y.

Among Pennsylvania entrants in last year's contest were: Floyd T. Smith, of Punxsutawney; Jack Meyers, of Berea, Ohio, who started a refuge at Grand Valley, Pa.; R. J. Hawley, of Northumberland; the West Hamburg Fish and Game Association; P. Gervase, of Latrobe, and J. C. Lacey of Mont Clare.

The Committee of Judges for this year's contest is headed by Ira N. Gabrielson, Chief, U. S. Bureau of Biological Survey.

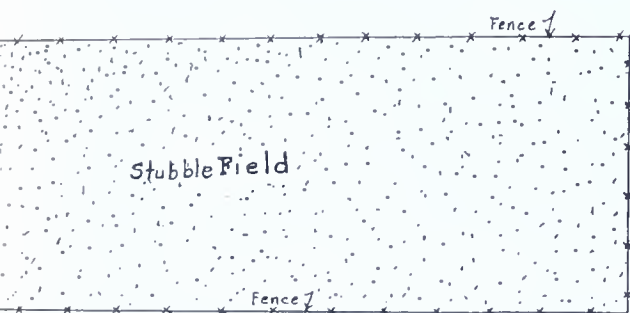


Typical Waterfowl Refuge Project.

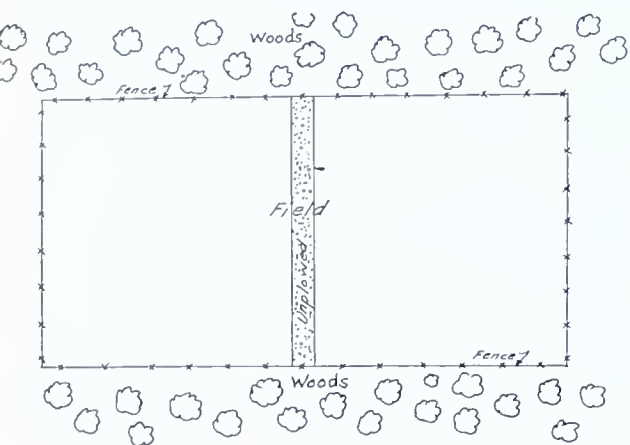


## GAME RESTORATION JOB FOR EVERYONE

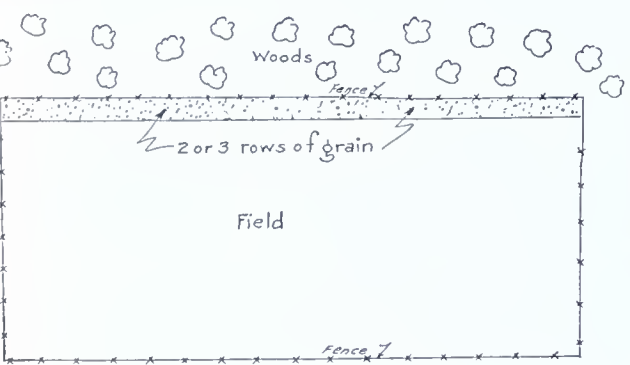
(Continued from Page 7)



Farmers can be persuaded to set the knives of their reapers high, say 8" or 9", and the larger bobbles and ragweed will furnish better feeding cover for birds seeking waste grains in the field. Whenever possible induce farmers to defer plowing and mowing weedy stubble strips near fence lines until spring. Doing so will help rabbits as well as game birds.



Leaving one or more narrow unplowed strips across cultivated fields will provide cover which is essential to game birds and animals for nesting purposes and in traveling from one piece of cover to another.



A few rows of grain or corn on the stalk left cut along the edge of a field of wheat, rye, corn, buckwheat, etc. near cover, furnishes food for wildlife. If farmers can be induced to husk a considerable portion of their corn crop, especially for game cover, from the stalk instead of cutting it off, the standing fodder and the few missed ears will furnish excellent game cover and food.

At a recent meeting of the Nature Club, Coatesville, Israel Berry, Cedar Knoll, who has made a life study of birds, condemned the habits of the crow, while Hayes Pfizmeyer, taxidermist and bird lover, believed the bird was not as black as its feathers. Mr. Berry, a farmer, has made an extensive study of birds from boyhood and says the crow ought to be kept in restraint.

## ASSISTING NATURE

(Continued from Page 24)

the little wild rose, He created also the weed, typical of which is the Canadian thistle. Still He gave to man the brains and the means of controlling these also, so that they may be restrained from predominating the plant world.

In your orchard are many varieties of fruit. Did God create the Stark-Delicious apple, the Northern Spy, and other varieties? No; He gave man the little wild crab, and the hawthorne, which is a miniature apple or germ, and from these man developed what we have today. Yet, according to some people's statements, if you kill the mice that girdle these fruit trees when they are small, you are "interfering with, or upsetting, Nature's balance."

If you are raising poultry, or other bird life, and hawks begin to destroy and live on the birds, and you fail to take a gun and shoot the hawks, then you are not using the brains God gave you.

If your clothing were to become infested with vermin or your dwelling with rodents, you would destroy the insects or animals that were troubling you. Yet (if they were consistent in their argument) these people would have to maintain that in doing so you were "upsetting Nature's balance," since God created all these creatures at the same time. Or how about the fly, carrier of typhoid? Do you control it or, preferring not to disturb "Nature's own" let it live? Personally, I am glad He gave man "dominion over all" these things.

Indeed, one is moved to ask the question. What would our animal world, our farms and orchards and gardens—our whole world—be like if man had not assisted Nature? Yet the very minute the white man discovered this continent, came ashore, cut down a tree and began to develop North America into a garden for hundreds of millions of people, that man, according to some, disturbed the balance of Nature.

As for me, I thank God for all He made—for the raw materials He gave us with which to work; that He endowed us with sufficient brains to develop those raw materials and keep on discovering and bringing within reach of us all the blessings He created. To illustrate my meaning, allow me to quote the poem, "Making a Garden," written by Ida M. Thomas:

*Man ploughs and plants and digs and weeds,  
He works with hoe and spade;  
God sends the sun and rain and air,  
And thus a garden's made.  
He must be proud who tills the soil  
And turns the heavy sod:  
How wonderful a thing to be  
In partnership with God!*

I say, He wants all of us to be partners.

It's not often that we hear tell of a bird killing a cat—it's usually the other way. In Wisconsin recently a Forest Ranger witnessed a Great Horned Owl swoop down and carry off one of the cats which lived at the forestry station.

## WITH THE CLUBS

(Continued from Page 21)

The Kennett Square Rod and Gun Club, of which the late W. B. Cochran, former State trap champion, was president for many years, held a meeting recently and turned over its trap houses and traps to

the Izaak Walton League of southern Chester County. The original club had \$74.93 in the treasury and the officers, Charles Mason, vice-president, William Worral, treasurer and Walter Grace, secretary, and other members voted to give the money to the Kennett Square Welfare. The Izaak Walton League accepted an invitation to hold its shoots over the Longwood traps.

The Quaker City and Roxboro Gun Clubs, near Philadelphia, are always active, winter and summer, and some splendid shoots have been held there already this year.

Evidences of severe suffering by game birds and animals during the past winter weather are cropping up everywhere throughout the state.

A farmer living near Wattsburg, in Erie County, told a strange story to the Presque Isle Sportsman's League.

He chopped down a beech tree on his farm and found, frozen stiff on one of the branches, a gray squirrel holding tightly against its breast a tiny chipmunk which it apparently had protected from the cold as long as possible.

The squirrel was extremely thin and apparently had no food for some time.

## BEAVER WINS IN DOUBLES

At the annual trap shooting tournament held over the New York Athletic Club traps, in May, Joseph Heistand, the Ohio farmer, successfully defended the amateur trap-shooting championship of America, breaking 198 x 200. Walter S. Beaver, Berwyn, Pa., captured the championship in the doubles. Heistand was runner-up.

S. M. Crothers, Philadelphia, Pennsylvania champion in the singles, tied with P. Miller, 197 all. In the toss the Quaker City marksman captured the trophy.

Other well known trap shooters who participated in the New York A. C. classics were: A. J. McDowell, 192; A. Mullhaupt, Jr., 190; D. Sweigert, 190; J. W. Eshleman, 189; W. H. Pearson, 188; T. I. Carson, 186; E. Lamberston, 185; J. L. Judd, 181; Charles Mason, 179; L. G. Danna, 178; J. B. Fontain, 161; T. C. Marshall, 161, all Pennsylvanians.

Messrs. Beaver, Danna and Crothers, are former title holders of the Grand American Handicap in different years. Sport writers had been predicting that Beaver was not so hot on doubles but he went out in front on Friday, May 1st, at New York, carrying off the honors against one of the greatest target shots in the world, Joe Heistand, a great sportsman and a good fellow well met at all times. Joe was quick to congratulate Beaver.

## TWO IN ONE

Mark Lake, of South Montrose, while hunting near Elk Lake, shot a grouse and a rabbit with one shot. The bird, stalked by the hunters, came upon a rabbit sitting in the brush. The rabbit showed signs of indignation over the intrusion and straightened himself up, while the grouse dropped its wings, cocked its ruffs and neck feathers, and showed signs of attack. At this time the dog worked in, the grouse started to fly, the rabbit started to jump, and Mark shot simultaneously and got them both.

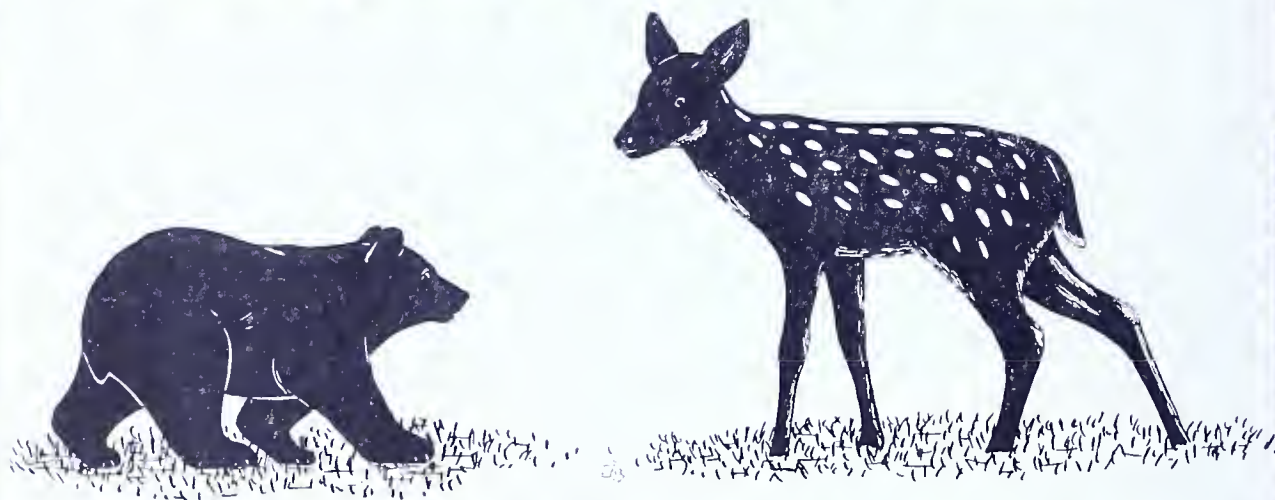




**W**ITHIN the next two or three months,  
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will have been reared at the State Game Farms.



**EVEN THOUGH YOU MAY  
BE ABLE TO CATCH THEM  
LEAVE**



**CUBS *AND* FAWNS  
IN THE WOODS!**

THEIR MOTHERS WILL RETURN TO CARE FOR THEM AND  
POSSESSION OF EITHER ONE RENDERS YOU LIABLE TO HEAVY FINE

**COMMONWEALTH OF PENNSYLVANIA  
BOARD OF GAME COMMISSIONERS  
HARRISBURG, PA.**



# PENNSYLVANIA GAME NEWS

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# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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# EDITORIAL

VOLUME VII

JUNE, 1936

NUMBER 3

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## WATCH PYMATUNING!

The big Pymatuning Reservoir, lying along the border of Pennsylvania and Ohio, was constructed primarily to increase the dry weather flow of the Shenango and Beaver rivers for domestic and industrial uses, and for controlling and reducing flood heights.

This project clearly demonstrated its value during the devastating flood of March 1936. There was no flood damage in the Shenango Valley, largely because about 9,000,000,000 gallons were stored in the reservoir during the flood period.

The States of Ohio and Pennsylvania have taken steps to increase the fish life and to develop two breeding and feeding refuges for waterfowl and other wildlife. Hundreds of pairs of ducks are now nesting on the Pymatuning Refuge, about 2500 acres of water and marsh, maintained by the Pennsylvania Game Commission. Ring-neck pheasants are nesting on various portions of the border land. This refuge is destined to become one of the show places in the eastern half of the United States. The Pymatuning project as a whole will attract increasing numbers of people to enjoy the recreational opportunities.

The authorities in charge of the Pymatuning Reservoir have decided that no motor boats or hydroplanes shall be allowed on this large lake, containing about 16,000 acres. All conservationists in both the States of Ohio and Pennsylvania fully approve of this courageous action. Dozens of organizations have endorsed it because they feel that there should be at least one large lake in that part of the country from which fast motor boats shall be barred, where people may bathe in peace and safety, where the fishermen in their row boats may complacently sit and angle to their delight, all without fear of being run down or upset by some high speed craft.

But these plans to make of the Pymatuning a different and better recreational area do not jibe with those of certain interests which seek to capitalize on this project. Their primary interest seems to be the development of adjacent real estate holdings.

Recently the authorities were dared to prosecute for using a motor propelled craft on the Pymatuning. Arrests have been made and the matter is now before the courts. The explosive exhausts of such craft will not only frighten waterfowl and drive them from the area, but the wash from the propellers and the wasted oil from the motors will be detrimental to fish life, as well as to aquatic vegetation which is essential to both fish and waterfowl.

## ROADSIDE MENAGERIES

There is before the present Legislature a bill (H. R. 83), sponsored by Governor George H. Earle, designed to safeguard the public from injury by wild animals at roadside menageries which are maintained to attract trade. It also proposes to assure humane housing for such creatures, and to protect them from cruel and improper treatment.

Numerous children, and some adults, were severely injured in Pennsylvania during the past few years because wild animals, particularly black bears, were not housed properly. In other states fatalities occurred. Sentiment condemning such carelessness has at last resulted in appropriate steps to curb this growing menace.

Governor Earle's bill proposes to give the Game Commission authority to grant permits for roadside menageries if, in its opinion, the provisions for housing and caring for the wild animals, and for protecting the public, are satisfactory. Such permits will cost \$5.00, renewable annually. Failure to comply with the provisions of this measure carries a fine of \$25.00 and costs of prosecution.

This bill has the whole-hearted endorsement of everyone who is interested in wildlife.

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## NEW PLANS ENDORSED

The Pennsylvania Game Commission's new game lands management and farm refuge program, outlined in the May number of the GAME NEWS, have met with almost universal approval. Comments from leaders throughout the State are all highly favorable. Leaders of sportsmen's organizations as well as of farm groups have been very enthusiastic in their praise.

Plans to put these new programs into effect are progressing satisfactorily. The Commission is approaching this big undertaking carefully to avoid the mistakes which would creep in if an effort were made to advance this new program too rapidly. As the machinery gets under way the organized sportsmen and landowners will be able to take over a constantly increasing share of the work incident to this new program.



# Correlating Forest Practice

By James N. Morton, Chairman

*The following report was prepared and read before the Allegheny Section, Society of American Foresters on February 28, 1936.*



Dead trees and logs provide good hiding and nesting places for wildlife.

**T**O this committee has been assigned the task of making constructive recommendations that will correlate forest practices as they apply to timber production, recreation and wildlife management on publicly owned lands. It does not seem to be within the scope of the Committee's report to take up these various practices, except insofar as they have a bearing on wildlife management or recreational uses. These latter two really should be mentioned in the same breath since they go hand in hand. In addition to the attraction which forest air and woodland charm exert, the presence of furred and feathered wildlife in forest cover, and of fish in mountain streams undoubtedly attracts thousands of town and city dwellers to the forest, there to regain strength of body and vigor of mind which enables them to return at the end of their sojourn in the woods better able to resume their business or professional activities.

One of the forms of recreation, which has in it a peculiar hold on that which is elemental in human nature, is hunting and fishing. However, the recreational value of game is not alone confined to the man who uses it for sport, but serves as well the people who do not take part in the chase, but get their enjoyment of the game and fish in the wild state. There is likewise an economic value of considerable importance represented in hunting and fishing. This includes the direct values of meat and fur as well as the contribution to business activity in the expenditure by hunters and fishermen for guns, ammunition and other equipment. Figures for all states of the Allegheny section are not available, but for Pennsylvania this economic value is estimated at about twenty million dollars annually.

Our people are gradually shortening the hours of work, and lengthening those available for recreation. It has become, therefore, essential that wise provision should be made for spare time thus made possible. This leisure is full of menace; it is likewise full of blessing. Leisure within itself is in no way related to crime, but the unwise use of leisure of any community may be the occasion of such crime. The right

use of spare time is as vital to good citizenship as is the right use of toil. Whether this spare time will be given chiefly to indoor sports and amusements or spent in healthful open air activities will depend upon the attractiveness of the public facilities for outdoor recreation.

One of the best possibilities for utilizing this leisure time by our people lies in the management of the publicly owned forests in such a way as to provide the greatest amount of recreational inducements compatible with other forest uses. There are opportunities for valuable educational work in a general recreational use of the forest by the public. It is much easier for people to be convinced of the values of forestry if they can see what is being done rather than if the only way they learn of it is through reading bulletins and other literature. For the purpose of moulding public opinion the policy of foresters should be not one of permitting the public to use their forest land, but of encouraging such use. Insofar as the undeveloped park areas, camp sites and picnic areas are concerned, there appears to be no reason why conflicts should arise over the proper silvicultural procedure to make the forest attractive for recreationists who use those areas. Generally speaking the development of this phase of recreation will not interfere to any great extent with the production of the maximum amount of the most valuable timber trees. In the well developed recreational areas the cutting of timber will probably be limited to the removal of a few defective trees or those endangering life. These areas, however, will cover such a relatively small area that they can well be left uncut at all times.

In wildlife management in the forest there is a possibility of certain divergent views, but these can be adjusted if each interest is willing to give and take. It is now admitted by most foresters that it is possible to integrate the various kinds of conservation. It is agreed that the same area can at the same time serve forestry, watershed protection, wildlife and recreation.

Wildlife management in its broadest sense includes:

1. Protection of game (enforcement of game laws, maintenance of game refuges wherein game may not be killed, and regulations on hunting).
2. Protection of songbirds.
3. Protection of fish and provision for habitable conditions for fishlife.
4. Artificial propagation or the raising of game in captivity for release to supplement the wild crop.
5. Wise control of predatory animals and birds.
6. Improvements of the environment for game with respect to food and cover requirements.
7. Protection of valuable fur-bearing animals by establishing open and closed seasons and by environmental improvements.
8. Provisions, where necessary, for the regulation of the number of animals or birds on any area to the carrying capacity of the area.

It is realized that the proper correlating of wildlife and forest land management is made more difficult in many cases by reason of the fact that in many states the control of game and fur-bearers is in one Department or Division of the State Government, while the ownership or control of the land is in another Department or Division, or in private ownership or Federal ownership. However, foresters in most States of the Allegheny Section will principally be required to lend their assistance in the improvement of the environment for wildlife or to so manage the areas under their jurisdiction that vegetation may be controlled so as to secure a continuous maximum production of food, shelter and breeding places, and hence a maximum of the desired wildlife species. The problems of protection, propagation and predator control can be left to those charged with the administration of the State's Game resources, where a separate organization for this exists.

Foresters quite often have the feeling,



Plantations of evergreens afford protection for wildlife, but they should be broken up into relatively small units.





Old fields, brushy pastures and other open areas near woodland are highly desirable to game as feeding, resting and play places.

because the management of wildlife is delegated to another Department or Division, that they should have nothing to do with it, but consider that they should administer their forest territory for the production of timber. While it is realized that the primary purpose of forestry is the production of merchantable timber and that foresters naturally are principally interested in that direction, yet it is the opinion of the Committee that it is as much a forester's duty under present conditions to provide adequate recreational facilities and to so manage his lands that the interests of wildlife will be served by improving the habitat to make it more suitable for wildlife, as it is to manage the timber crop efficiently. There must be a well-planned program which has in view not only the economic usefulness of the forest, but also social welfare. He must manage his forest in such a way as to yield the largest net total of public benefits.

It is, of course, a well known fact that many species of game are dependent wholly or partly upon the forest, yet to state that the forests in their *natural* state improves game conditions is somewhat misleading. In other words forests allowed to develop naturally do not always improve game conditions. Practically all kinds of game require more than one forest condition or forest type. For instance, a mature stand of trees or a stand of growing trees, where the crown canopy has closed, is not the ideal type for abundant wildlife. Large timber stands thickly upon a given area, sheds its limbs to a considerable height, leaving no low branches upon which browsing animals, such as deer, may feed. The same shading process which eliminates low limbs also precludes the growth of any appreciable amount of understory. Consequently, a forest of larger even-aged, or partially even-aged trees, quite often is open as to its floor, carpeted only with pine needles or fallen leaves, and offering scarcely any food and very little cover in which game may hide, save in the leafy canopy and at a great height from the ground-attainable by only a few animals and by birds. On the other hand, forested areas, with their overstories of trees of diversified species, their understories of nut, fruit and berry-bearing shrubs and bushes, furnish food and cover for practically all kinds of wildlife. The understory provides the browse for deer and

elk, the berries and seeds for small game birds and animals, and the low plants which harbor insects necessary as food for the young game birds.

In order to have suitable habitats for wildlife, it therefore becomes necessary to make some provision for it on those areas where the timber is mature, or is becoming large. It is realized that we know practically nothing about the effect on game of the various silvicultural practices, but it is known that generally speaking a forest of many age classes and of mixed species is much better for game than large areas of trees more or less even-aged. Where there is mature timber of a considerable area, part of it should be cut as rapidly as a market can be found. The selection system of cutting, or a modification of this system, seems to offer as a rule the best conditions for game. The sheltered-wood system would be valuable where the cutting rotation period is 10-20 years apart. Where the timber is *not mature* thinning operations, designed to keep the crown canopy open, should be conducted. This will allow

the sun to penetrate to the ground and from it young growth and low herbaceous plant life to exist. In cases where thinnings are conducted it is believed that the number of trees removed should be such that the crowns will not close in less than five to ten years. Such thinnings should increase the rate of growth of the remaining trees, and also provide undergrowth for game. Where it does not seem advisable to carry on this thinning operation over large areas, temporary openings of a few acres here and there should be made by clear cutting in order to provide suitable conditions for wildlife. Just how these cuttings should be interspersed, or what percentage of the area should be cut, the committee at this time is not ready to recommend. As a start it would seem that five acres out of each hundred could be used. These should be made in about one acre plots scattered over the area.

It might be argued that it would be best first to conduct research to determine the exact practice to follow. It must be remembered that the field to be covered for each of the game species in this section is so great that many years would be required to gather together enough data by research to make it possible to decide upon a system of practice. It would seem that there should be some practice first before it is possible intelligently to decide just what particular points research should attempt to answer. Much of the European and American silviculture was not based upon research, but rather the research was built upon a great amount of practical experience. What is known should be taken, and as good a job as possible made to cooperate with other agencies for the forest-game research needed immediately and in the future. As progress is made it is a certainty that more will need to be known about food habits of the various wild-life species, as well as information on a multitude of varying conditions, among which will be the effect of various kinds of forest thinning operations, the effect of plantings on game, the carry-



An understory of tree and shrub growth in the forest provides the browse for deer and the berry seeds for small game. Provision must be made for these in forest management.





Forest roads are valuable in connection with administration and protection but secondary ones should be closed to vehicular traffic.

ing capacity of the forest for different animals and birds, and the best method of silviculture.

#### Plantations

In the planning of coniferous plantations, game should be taken into account. While it is true that such plantations afford protection to wildlife from storms and as a means of escaping their enemies, yet game does not penetrate to any great depth into those planted areas. They should be broken up into relatively small units of not more than five to ten acres. The areas between the plantings of conifers should be planted with hardwood trees and shrubs, or permitted to grow up to the miscellaneous plants which provide browse for deer and food for other game species. Insect and disease control on the trees of the area should be made much easier. It has been the general policy in the past to plant every old field and opening which occurs in the forest area. This is distinctly detrimental to game. The old fields, brushy pastures and other open areas near woodland are highly desirable to game as feeding grounds, as resting and play places, and where the young can secure insects. Part of them should remain unplanted insofar as conifers are concerned.

It would be advisable where CCC camp labor is available to break up with a tractor and plant food patches of grains, grasses or clover on some of these open areas. Arrangements in most cases can be made to do this work in cooperation with sportsmen's groups or game officials.

Where forest tree nurseries for the distribution of tree seedlings to the public are maintained, more attention should be given to the raising of some of these trees which produce valuable game and bird food, and at the same time valuable wood-products. Wild black cherry and the various oaks are among those which should be considered in sections where they are not now abundant. It would also seem advisable to include a number of the ornamental flowering shrubs which would be used for planting to enhance the beauty of State parks or State forest

parks. Flowering dogwood, June-berry, and Judas trees are some of those which might be used.

#### Improvement Cuttings and Forest Cleanup

In recent months improvement cuttings by CCC Camps are being conducted more in the interest of wildlife, as well as for the production of valuable timber. The Committee believes it is worthwhile, however, to make mention of certain things which should be kept in mind by foresters in improvement cutting practice. We do not believe that anything should be cut unless some good will result from that cutting. The cutting of shrubs should not be condoned. Little, if any, good results to tree growth in the removal of all dogwood, witch hazel, hawthorne, laurel and other shrubs. Nearly all of them produce seeds, berries or nuts relished by game, and many of them

have attractive flowers which are enjoyed by recreationists. At least a good number of hollow trees and "wolf" trees should be allowed to remain. They provide homes for squirrels, raccoons, and for many song and insectivorous birds. Very little, if any, clearing along fishing streams closer than 100 feet should be carried on. Removal of all undergrowth along streams render them less habitable for fish and it destroys grouse and woodcock cover. Brush resulting from cuttings where it does not constitute a fire hazard should be permitted to lie on the ground. It will be browsed on by deer in the winter, and will provide cover for game. Grape vines should not be cut except where they run up high on valuable trees. In many cases these vines, as well as such shrubs as hawthorne, bittersweet, sumac and others, can be released from suppression by the removal of a few trees to permit more sunlight. Much good to game would result.

Intensive forest cleanup should be avoided. It will not be practical to maintain such conditions in the woods. It must be recognized that the fallen tree, the rotting log and the dead parts of trees in the forest are valuable to wildlife as hiding and nesting cover, and as a place to secure insects and grubs. This material likewise furnishes organic substances essential in promoting the growth of other forest trees and shrubs. Intensive forest cleanup should be limited to those areas where there is a definite forest fire hazard and where there is also a risk that a fire will start.

Protection from forest fire should be carried on vigorously. Insofar as this section of the Society is concerned there seems to be no doubt that fires affect adversely timber production, wildlife and recreation. No one is interested in spending their vacation on a fire blackened forest area. There is in fact no inducement to frequent these parts of the woods which have been burned. Fire destroys or drives out living creatures from an area; destroys nests and locations for nests; destroys much of the desirable native vegetation, thereby de-



Fire trails are useful in forest protection and they provide just the kinds of openings in the woods which game like to use as feeding and play places.



creasing the food supply and shelter possibilities, and it makes an area worthless for a considerable time for game birds and most other forms of wildlife.

Construction of fire lanes for the protection of the forest from fire is distinctly beneficial to forestry, wildlife and recreation. They provide excellent trails over which hikers and others interested in recreation can travel. They provide just the kind of openings in the woods which game like. They are used as feeding grounds, play places for young and adult animals and birds, and they are used extensively by birds for dusting.

The forest should be rendered reasonably accessible for forest fire control by the construction of roads. However, hasty and ill-advised "development" may destroy the very values which it is desired to preserve. Too many roads making all parts of the forest accessible to anyone who might seek them will have a detrimental effect on wildlife and will ruin the forest for the type of camper or hiker who wishes to get to isolated areas, and will no doubt increase the forest fire hazard. Certain areas could well be set aside as wilderness areas, accessible only by trails. Likewise the cost of maintenance of too great a road mileage may not be justified even though the initial cost is borne by the relief agencies. The Committee believes that secondary roads should not be constructed in a way as to invite their use by the public. It would be better to make them purely protection roads by merely clearing out the stones, draining the roads, and making them fit only for emergency travel. If better ones are constructed they should be barricaded to all use except by Forest, Fish and Game officials. Where the secondary roads have already been graded they should be closed to public use especially during the hunting season.

#### Forest Park and Recreational Areas

Forest Park areas for recreational purposes should be set aside as rapidly as desirable areas are available. Some of these could be left undeveloped while others should be improved. These latter areas should be carefully laid out with provision for a supply of good water, safe sanitation, and, if possible bathing facilities. Areas of natural beauty should be selected. Streams and brooks add much to the attractiveness. Planting of native flowering shrubs would be desirable on most areas. Adequate roads are necessary, but most of the park area should be available by foot paths only. In this way the natural beauty will be preserved. Special areas should be designated for picnic or playground purposes. At such locations fireplaces and tables should be provided. The part of developed Forest Park areas on which shooting is prohibited should not exceed 500 acres in size.

The forester should strive for genuine natural conditions in the forest park areas. Cutting of trees and shrubs should be limited to removal of deformed and dead trees where they constitute a forest fire hazard or along roads, trails and intensively used areas where they may endanger life or property. All dead trees should not be considered objectionable just because they have ceased to produce good lumber. If the park is to be retained in its natural condition

certain of those trees should remain standing. They are also valuable habitats for birds and some small mammals.

The proper maintenance of park areas is extremely important. If the area is not properly maintained it cannot be kept respectable, regardless of how luxurious the improvements are. It would seem advisable to charge a small fee for the use of park areas that have been developed. Those that get the benefits from the facilities which are provided should pay the maintenance costs rather than have funds for this purpose taken from the general revenues.

Overnight shelters with a few picnic tables and fireplaces for cooking should be



Forest Ranger Clyde Raitt of Edgemere with 320 lb. bear killed with a .22 rifle.

provided frequently along forest roads on publicly owned land. Water supply with conveniences is extremely important. In addition to those areas provided along roads, open camps should be established on fire trails at remote points for the purpose of inviting the nature lover to those places, and in order to provide accommodations to the recreationist who wishes to get away from the beaten path. These areas should be reached only by foot paths, and be designated by the use of signs.

Many people have a desire for a summer cottage or hunting cabin in the mountains. Leases for such buildings should be granted on publicly owned lands only whenever not incompatible with the needs of larger numbers of people. Areas where camp sites are leased should be carefully selected and limited in extent and number. Once an area is set aside for cabins it is difficult to restore it to a condition of more general usefulness.

#### Stream Improvement

Forests have a considerable influence on fish and other aquatic life. Forest growth

affects the temperature of the water, rendering the streams more habitable, especially for trout. They likewise provide a certain amount of food in the form of insects which drop from overhanging branches. They regulate the runoff from rains, thus producing a greater regularity in streams. It is well known that streams with a gentle current without extensive fluctuations are more habitable than those subject to violent floods and freshets.

It will be comparatively easy to work in with any plan of forest management, improvements in the streams for fish life, since they will not greatly conflict with silviculture. In the vicinity of streams, all tree, and shrub growth should not be cut when logging operations are being conducted. However, where the trees and shrubs along the banks are crowded too closely together the removal of some is beneficial. Fish are dependent for food to a great extent on plants, particularly algae. If trees and shrubs along streams are too close together the shade may seriously interfere with the growth of these plants.

The matter of shelter for fish is likewise extremely important. Before the lumbering operations closed, most of the mountain streams afforded favorable habitats. They had in them great quantities of old tree tops and huge piles of what was then called driftwood. This debris was usually lodged in some of the bends in the streams which deflected the current, scouring out a great hole to the side. The logs and brush furnished support for insects and other aquatic organisms. This material as well as the pools furnished excellent shelter. After the mountains were deforested the streams were gradually cleaned out and they likewise became subject to greater freshets than in the earlier days. Many of the streams that were once particularly habitable for trout are now practically denuded of all vegetable matter. These streams can be helped by building artificial deflectors, retards and small dams, in order that satisfactory living conditions for fish may again be provided. The Committee believes that CCC Camp labor should be continued on such worthwhile projects, because of the part which fish life and fishing plays in recreational pursuits.

#### Game Census

In some areas, notably in Pennsylvania, game, especially deer, have become so numerous as to be a menace to the production of timber and to agricultural crops. Wherever such conditions exist those charged with game administration should be urged to provide seasons to reduce the herd to the carrying capacity of the forest. Each area is capable of supporting only a certain number of animals. A failure to recognize this fact eventually leads to destruction of the forage resources, may induce erosion of the soil, and do damage to all other resources, which finally leads to the destruction of the wildlife itself. This carrying capacity is not definitely known, but experiments to determine it fairly accurately are now being carried on by the Pennsylvania Department of Forests and Waters, and the Pennsylvania Game Commission.

A game census is quite essential properly to regulate the annual kill of game.  
(Continued on page 20)



# Group Management For Game Refuges

By W. Gard. Conklin

**S**PORTSMEN have been informed in previous issues of the GAME NEWS and through the medium of the public press that the general plan of activities in connection with the State's system of refuges and public hunting grounds is undergoing some rather drastic changes. One important phase of the general program, the purchase of State Game Lands, is being curtailed, while other phases are being considerably expanded. The Board at its meeting held April 8th and 9th, adopted a number of new policies which are expected to have far reaching effects in improving game conditions throughout the State. They deal with a plan by which it is hoped to extend the refuge system, with accompanying public hunting grounds, into agricultural territory, reducing the size of some of the older and larger refuges in forest territory, the creation of numerous small refuges, the land purchase program, and generally re-vamping the functions and organization of the Bureau of Refuges and Lands.

Mr. Gordon in his article entitled *New Small Game Program Launched*, which appeared in the May issue of the GAME NEWS, explained at some length the plan for the extension of the refuge system in agricultural territory and certain other phases of the new program. This article is more or less of a "follow up," with the idea of more fully explaining certain phases briefly touched on by him, and especially the re-vamping of functions and organization. The new plan has many ramifications, technical and otherwise, and much time and effort will be required in working out details and making it operative.

During the past nine years more than half of the funds accruing from 75c from each resident hunting license have been used for the purchase of State Game Lands. For the five-year period beginning June 1, 1930 and ending May 31, 1935, the expenditures for the purchase of lands, including title and survey costs, amounted to 65% of the total expended for all purposes in connection with the refuges and lands program. Now that more than a half million acres of State Game Lands have been acquired, the Board has definitely decided on an expansion of development activities on those lands. Such activities have been conducted for many years, but will now be carried on much more intensively.

## Development of Lands and Refuges

Development of better game environment is, of course, based on the desire to increase game to the carrying capacity of the area, and to maintain it on a sustained yield basis. Both are directly dependent on the quantity and suitability of food and cover, especially for winter months. Deep snows and low temperatures this winter demonstrated more forcibly than ever the necessity for this.

Improvements, in general, will include food and cover development, especially within primary refuges, but also wherever desirable on State Game Lands outside of refuges; construction of fire protection roads



Farm Game refuges for ringnecks, quail and rabbits are included in the Board's new wildlife program.

on lands wherever this is decided necessary; and the maintenance of fire roads and trails on practically all blocks of land. Of course, refuge lines and boundary lines of State Game Lands must also continue to be maintained in good condition. Food and cover development will consist largely of release cuttings to stimulate sprout growth to provide browse for deer, as well as the natural reproduction of shrubs and weeds to provide food for small game; planting trees and shrubs produced in nurseries, or by transplanting from naturally productive areas to spots where they can be expected to grow successfully in order to increase food for small game; spot planting of evergreen seedlings for cover; and the sowing, usually in spots, of grains, legumes, etc., on tillable areas.

A recent survey indicates a total of about 1,700 acres of tillable areas scattered over the half million acres of State Game Lands. Plans are now under way to sow grains, legumes, etc., this year on about 450 acres of this, mostly on small spots but in some instances up to 5 acres.

Plans are also under way, especially on the older and larger primary refuges and on certain tracts of State Game Lands where the crown canopy has closed, to do some cutting of large timber. In all probability the method which will be followed will be to cut heavily on an acre or two here and there in order to stimulate sprout growth. Brush patches resulting will provide food and cover for small game since berry and nut producing shrubs will naturally make their appearance with the advent of sunlight.

Wherever cutting operations are decided upon, careful consideration must, of course, be given to economical disposal of usable wood products. Timber suitable for lumber, mine props, ties, chemical or pulp wood, fire wood or anything else which can be sold to produce revenue, should by all means be marketed.

In this connection, certain provisions of law must be borne in mind. The Adminis-

trative Code under which all governmental departments are administered provides, ".....under no circumstances shall live trees be cut for sale unless and until the Department of Forests and Waters has approved the cutting of such trees....." The Game Code provides that, "The Board, after consultation with the Department of Forests and Waters, may cut and remove and sell, or permit the cutting and removing and selling of, timber on lands to which title has been acquired by the Board....." In other words, the Game Commission is not permitted even on State Game Lands to cut timber for sale without the approval of the Department of Forests and Waters. Likewise, any development activities of a drastic nature on refuges located on State Forests or on the Allegheny National Forest must be subject respectively to approval of the Department of Forests and Waters or the U. S. Forest Service.

Not all blocks of State Game Lands require special food and cover development at this time, but to determine definitely just where and to what extent such work is essential will require a thorough examination of practically all lands owned or under control of the Commission.

## Refuge and State Game Land Units Grouped for Management

A plan for grouping together all State Game Lands, including primary refuges established thereon, refuges on State Forests, and leased auxiliaries on privately-owned lands, within a specified territory and placing a refuge keeper in charge of each group for protection and management has been advocated for a number of years. The plan has now been approved by the Board with the understanding that the number of refuge keepers will be increased from 38 to 44, and that the plan will be put into effect as rapidly as arrangements can be made. The additional refuge keepers required will be appointed from the Game Commission Training School.

The basic reasons for the adoption of the plan are:

1. To make it possible more thoroughly and systematically to develop and improve all land and refuge units, by having them managed by refuge keepers who are especially trained for the particular types of work required.
2. To simplify administration from the Harrisburg Office, as well as by Division Supervisors.
3. To relieve District Game Protectors, at least in part, of the responsibility of managing and improving land and refuge units, since they have enough to do without having such an additional burden imposed upon them.

The management of refuge and land units had become antiquated. In many instances a refuge keeper was responsible for the care of one large refuge, or one tract of State Game Lands with one or more refuges thereon, whereas a great many similar units



**Refuge Keeper Bert Oudette placing food for ducks along margins of Pymatuning waterfowl refuge.**





Oliver Litzalman, of Cogan House, Lycoming Co., with four beavers taken in that vicinity. One weighed 60 lbs.

## TRAP 2,000 BEAVERS

Records show that 2,231 beavers were taken during the past season. This number is more than the Commission anticipated due to the severe weather and high floods.

Too few were removed, however, to control these animals properly in certain sections and in all probability another open season will have to be established next year.

## MAY PICK BERRIES

By regulation of the Board adopted last year the picking of berries, fruits, nuts or mushrooms on State Game Lands, either within or outside of refuges, was prohibited. This resulted in considerable adverse criticism from many sources, so the Board at a recent meeting changed the regulation to allow such picking on State Game Lands *outside* of refuges under special permit from the Harrisburg Office. The intent is that where a surplus of fruits, nuts, etc. exist on any particular block of game lands, or any section thereof, such surplus should be made available especially for the needy.

# CURRENT TOPICS

## RESEARCH IN THE NEW EXPERIMENTAL PROGRAM

The Game Commission's new experimental program, which includes the establishment of a system of small farm game refuges and the development of a limited number of cooperatively controlled shooting areas both located in the closely tilled agricultural area immediately adjacent to the metropolitan districts of Philadelphia and Pittsburgh, offers unexcelled opportunities for detailed game research designed to throw some light upon numerous problems with which our own and many other wildlife administrative bodies are now faced.

First of all, and from a very broad viewpoint, we shall gain from the new program a clear and concise picture of small game conditions in heavily hunted regions both before the application of those principles which have proven so effective in the restoration of certain large game species and following their application over a period of years. In other words, we shall be able to quantitatively determine the feasibility of and the benefits derived from the operation of a system of small farm game refuges.

Along more detailed lines, we shall learn much regarding the annual game crops which we may reasonably expect to harvest from the intensively farmed sections in the southeastern and southwestern corners of the state. It will be possible to figure the number of hunters who may be allowed access to areas of given size with almost certain guarantee of a due bag accompanied by proper training of the game populations. We shall learn the most successful and economical methods to be employed in food planting and game stocking programs. There will be determined sound cooperative policies to be entered into by landowners, sportsmen and game officials.

In short, the experimental program as

## LAUD GAME OFFICIALS

Members of the Wilkes-Barre Camp of United Sportsmen recently held a farewell dinner for Maurice Sherman who was transferred to Division G with headquarters at Greensburg, Westmoreland County. At the same time they gave a hearty welcome to Jay C. Gilford, the incoming Supervisor, who formerly was in charge of Division F, with headquarters at Oil City.

## CARELESS HUNTER'S LICENSE REVOKED

The hunting license privileges of Paul A. Seiple, Bangor, Northampton County, have been revoked by the Board of Game Commissioners for five years because of the careless handling of firearms, causing a hunting accident last Fall in which Seiple injured Luther Stametz, also of Bangor. The Game Commission exerted its authority under the provisions of an amendment to the Game Code, approved in 1935, whereby persons who cause injury to a human being through negligence or carelessness while using firearms are subject to the loss of their licenses.

In revoking Seiple's license the Commission stated that it is its intention to continue to utilize this effective weapon to disbar other hunters who are careless with firearms.

adopted, will enable the Game Commission to point out a long-time game management program which will prove beneficial to the farmer, the sportsmen and all other persons interested in the conservation of wildlife.

## GORDON SPEAKS AT MANY GATHERINGS

Having gotten the "feel" of things again after being away from Pennsylvania for ten years, Seth Gordon, Executive Secretary of the Board, has been renewing old acquaintances during the past few months getting a first-hand look at some of the Commission's important holdings, and at the same time doing a little liaison work in outlining to the sportsmen some of the new policies recently adopted by the Commission.

During March, April and May he addressed the following important meetings: Wilderness Club, Philadelphia; New Cumberland Sportsmen's Club, New Cumberland; Camp and Trail Club, Philadelphia; The George Zimmerman Testimonial Dinner, Allentown; Adams County Fish and Game Association, Gettysburg; Millersburg Rod and Conservation Club, Millersburg; Elk County Sportsmen's Association, St. Marys; Jefferson County Sportsmen's Association, Punxsutawney; Butler County Hunting and Fishing Club, Butler; Mercer County Sportsmen's Club, Grove City; Waynesboro Fish and Game Club, Waynesboro; Red Lion Fish and Game Association, Red Lion.

Mr. Gordon recently returned from the Pymatuning Waterfowl Refuge after having surveyed that area in company with Commissioner Robert Lamberton and various members of the staff.

He also visited the Fisher, Loyalsock and Jordan Game Farms, and expects very soon to make a trip to the wild turkey farm.

Members of the Board also attended a great many meetings and visited quite a few of the Commission's projects during the past two months.



LAND PURCHASE PROGRAM

During the past several months title was taken to almost 9,000 acres of additional good game territory in seven counties of the State, bringing the total of refuges and public shooting grounds now owned by the sportsmen up to 500,301 acres.

Primary among these purchases was a tract of 2,309 acres purchased from the Harman Creek Coal Corporation in Washington County. For years the sportsmen of that section and the Game Commission tried to secure suitable territory for increasing small game, and the purchase of this tract stands as a testimonial to the untiring efforts made in this connection. The tract will be known as Game Lands No. 117.

Another large tract comprising 2,429 acres of good grouse cover was purchased in Luzerne County from Lily Lewis Seneff. This area will be designated as State Game Lands No. 119.

The next largest tract was purchased in Somerset and Fayette Counties from Tillie Werder and Fred W. Biesecker, et al. This area, comprising 2,397 acres, is splendid small game territory, and together with a small tract comprising 268 acres in Somerset County purchased from the U. S. Annuity Society, will form a part of State Game Lands No. 111, bringing the total area of that block up to 5,592 acres.

Another splendid tract, comprising 917 acres, to be known as State Game Lands No. 120, was purchased in Clearfield County from the Estates of William H. Sanford and David W. Michael, both deceased.

Two tracts were purchased in Huntingdon County, one of 114 acres from the County Commissioners and another of 20 acres from Vina Lang. They will be known as State Game Lands No. 118.

State Game Lands No. 91 in Lackawanna County was increased by the purchase of 465 acres from the Michael Topper estate. This addition brings the total acreage of State Game Lands No. 91 up to 8,255.

FARM PLANTING FOR GAME

Burt Oudette, Refuge Keeper at Linesville, has developed a very good game feeding program. He has interested the Linesville 4-H Club, in the Linesville school, to plant six rows of Kaffir corn fifty feet long. The planting must be done near good cover. There are three townships, Sadsbury, Pine and Conneaut Townships, involved. For the best six rows first, second and third prizes are given. So far twenty-two have signed up for the competition. The seed will be furnished by Mr. Oudette, and the money for the purchase of the seed, as well as money for the prizes, is secured by soliciting business men and others. It would seem that many of our other field men might conduct similar competitive plantings.

PROSECUTIONS

During April, 118 prosecutions for game law violations were made and \$2944.79 in penalties were collected.

Four Spotlights were apprehended by Game Protector L. H. Wood, of Tioga County, last month. All of them were found guilty and sentenced to pay a penalty of \$100 each.

SPECIAL LICENSES

The following special licenses have been issued from June 1, 1935 to April 30, 1936:

Taxidermy .....	229
Ferret Owner's .....	74
Ferret Breeder's .....	1
Propagating .....	358
Collecting .....	19
Fur Dealer's (5.00) .....	203
Fur Dealer's (10.00) .....	290
Fur Dealer's (50.00) .....	15
Fur Farming .....	52
Field Trials .....	22

SPORTSMEN INTERESTED IN PROPAGATION

The Division of Propagation and Game Farms reports a marked increase in the number of Ringneck pheasant hatching eggs and day-old chicks applied for by sportsmen this year as compared with 1935 demands.

Although the last date for receiving such applications is March 15th of each year, requests are still pouring in, as this is written, from every part of the State. The State Game Farms are being taxed to capacity in an endeavor to fill these orders in addition to the Commission's regular game bird raising program and many of the late comers may have to be disappointed.

MORE FOX HUNTING

Fox hunting in Pennsylvania is beginning to show an upward trend, especially in the southeaster counties, and if this sport keeps increasing at the rate it has been during the past few years it will affect materially the State's wildlife program and no doubt will have to be subjected to more rigid regulation.

NEW BEGINNER'S BULLETIN

As a great many applicants requesting pheasant eggs are attempting Game Propagation for the first time the Division of Propagation and game farms has just completed a new beginner's bulletin, a copy of which is sent out with every shipment of eggs.

This bulletin, which shows every step of the hatching and rearing process in clear, easily comprehended form, also contains many working drawings of necessary equipment and also complete feeding directions.

A copy of this bulletin may be had upon request by addressing the Board of Game Commissioners, Division of Propagation and Game Farms, Harrisburg, Pa.

STOLEN CAR

1935 Ford Coach; License No. 3S2D2; Engine No. A4155115; color, gray; with trunk and spot light on the left side, was stolen from the garage of A. S. Snyder, Fish Warden, Mifflinburg, Pa., on May 13.

Please keep on the look-out for this car and communicate any information to either the State Police, Highway Patrol, or Mr. Snyder direct.

THE TRAINING SCHOOL

Tremendous interest in the new Training School for field officers is evidenced by the fact that 2,255 persons requested information on the subject and 949 filed applications. There are 770 field investigations now under way to determine the eligibility of these. The school will officially open on June 29.

Great blue herons can deliver a stroke with their bills that compares in speed with the strike of a poisonous snake.



Beautiful ice formations along Pymatuning waterfowl refuge, Crawford County. Quite a few ducks are nesting there now.



OPPOSSUM



ORDINARY GAIT

Summary Sheet of Bounty Claims Allowed on Noxious Animals During the Period of March 1936

Counties	Wild Cat	Gray Fox	Gos-hawk	Wea-sels	Amount
Adams	0	27	94	0	\$ 202.00
Allegheny	0	9	170	0	206.00
Armstrong	0	7	233	0	261.00
Beaver	0	3	49	0	61.00
Bedford	0	29	135	0	251.00
Berks	0	14	316	0	372.00
Blair	0	11	105	0	149.00
Bradford	0	13	430	1	517.00
Bucks	0	49	335	0	531.00
Butler	0	4	338	0	354.00
Cambria	0	16	248	0	312.00
Cameron	0	20	7	0	87.00
Carbon	1	9	79	0	130.00
Centre	0	39	151	1	312.00
Chester	0	7	365	0	393.00
Clarion	0	2	227	0	235.00
Clearfield	0	34	305	0	441.00
Clinton	0	18	29	0	101.00
Columbia	1	3	136	3	178.00
Crawford	0	1	548	0	552.00
Cumberland	0	6	142	0	166.00
Dauphin	0	15	100	1	165.00
Delaware	0	0	88	0	88.00
Elk	1	6	84	0	123.00
Erie	0	1	305	0	309.00
Fayette	0	53	270	0	482.00
Forest	0	0	79	0	79.00
Franklin	0	19	115	0	191.00
Fulton	0	4	36	0	52.00
Greene	0	9	46	0	82.00
Huntingdon	0	45	182	3	377.00
Indiana	0	18	261	0	333.00
Jefferson	0	10	221	0	261.00
Juniata	0	15	75	0	135.00
Lackawanna	0	25	81	1	186.00
Lancaster	0	17	341	0	409.00
Lawrence	0	2	129	0	137.00
Lebanon	0	4	102	0	118.00
Lehigh	0	3	180	0	192.00
Luzerne	0	35	371	2	521.00
Lycoming	1	36	76	2	245.00
McKean	1	9	151	0	202.00
Mercer	0	2	210	0	218.00
Mifflin	0	20	50	0	130.00
Monroe	2	8	191	2	263.00
Montgomery	0	14	261	0	317.00
Montour	0	0	63	0	63.00
Northampton	0	16	148	0	212.00
Northumberland	0	9	110	1	151.00
Perry	0	18	92	2	174.00
Philadelphia	0	2	33	0	41.00
Pike	0	24	35	0	131.00
Potter	0	7	30	2	68.00
Schuylkill	0	43	365	1	542.00
Snyder	0	2	71	0	79.00
Somerset	0	32	353	0	481.00
Sullivan	0	3	55	2	77.00
Susquehanna	0	44	140	0	316.00
Tioga	0	16	129	3	208.00
Union	0	11	49	0	93.00
Venango	0	11	284	0	328.00
Warren	0	0	156	0	156.00
Washington	0	11	119	0	163.00
Wayne	0	44	79	3	270.00
Westmoreland	0	26	592	0	696.00
Wyoming	0	15	85	0	145.00
York	0	32	385	0	513.00
TOTAL	9	1,057	11,820	30	\$16,333.00

Total number of claims paid during the month 5,725.

RED FOXES INCREASE

There is a noticeable increase of red foxes in the northern counties. Apparently our vermin trappers have been inactive during the past few years because of the low price paid for pelts. The control of our fur-bearers is regulated almost entirely by the fur market.

RED FOX STOMACH EXAMINATIONS

Stomach examinations made of 206 fall and winter red foxes from New York and New England showed the following:

Mice, 29.3%; rabbits, 22.1%; grasses, 13.9%; sticks, dirt, trash, 13.9%; carion, 6.2%; fruit, 8.1%; insects, 5.3%; poultry, 3.1%; squirrels, 2.9%; porcupines, 1.8%; game birds, 1.4%; small birds, 0.5%; shrews, 0.8%; worms, 0.8%; grain and nuts, 0.4%.

U. S. SPORTSMEN SPEND \$9,000,000

The Biological Survey, United States Agriculture Department, Washington, D. C., declares that over 6,000,000 hunting licenses were taken out in America in 1934, which costs the sportsmen \$9,000,000. The licenses increased 180,000 over the previous year, the report says. Pennsylvania leads all states with 574,690; New York, 529,369; Michigan, 433,780; Ohio, 422,294; Indiana, 324,582.

DEER DROPS FROM PLANE

Mrs. Kathryn Stout, of Salt Lick Township, Fayette County, heard her chickens making an unusual commotion one day. Upon going into the yard she noticed a large cabin airplane circling her home, at an altitude of approximately four hundred feet. At the same time she observed a large object falling which she thought was a bird. It landed about two hundred feet away. She called to a neighbor boy who immediately ran to the object which proved to be a young deer. Within a few minutes a small crowd had gathered, among whom was Deputy Game Protector John L. Smith of Indian Head. It did not seem logical to him that the animal had fallen from the plane, so he immediately began looking for deer tracks, thinking the creature walked into the field and met with foul play.

Finding no tracks, he reached the conclusion that the deer actually fell from the plane. Game Protector R. G. Bryson was notified and after a rigid investigation no further clues were found to lead them to believe otherwise. Just who the owner of the plane is and what the deer was doing in it will remain a mystery. The ground was soft where the animal struck, leaving a hole approximately one foot deep. It landed on its head, breaking its neck instantly.

A snowy owl caught and killed two ring-necked pheasant hens in the Beaver Meadow Refuge, Clearfield County. George Lukehart and Jack Williams of DuBois were eye witnesses to the slaughter but were unable to prevent it. They returned the next day, however, and killed the owl which had a wing spread of 59".

Summary Sheet of Bounty Allowed on Noxious Animals for the Month of April 1936

Counties	Wild Cat	Gray Fox	Gos-hawk	Wea-sels	Amount
Adams	0	1	0	31	\$ 35.00
Allegheny	0	4	0	62	78.00
Armstrong	0	4	0	48	64.00
Beaver	0	1	0	10	14.00
Bedford	0	11	0	78	122.00
Berks	0	2	0	71	79.00
Blair	0	11	0	56	100.00
Bradford	0	10	0	128	168.00
Bucks	0	19	0	123	199.00
Butler	0	3	0	62	74.00
Cambria	0	2	0	100	108.00
Cameron	2	5	0	2	52.00
Carbon	1	4	0	21	52.00
Centre	0	16	0	64	128.00
Chester	0	1	0	87	91.00
Clarion	0	1	0	59	63.00
Clearfield	0	7	0	122	150.00
Clinton	0	13	0	13	65.00
Columbia	0	6	0	78	102.00
Crawford	0	1	0	177	181.00
Cumberland	0	5	0	41	61.00
Dauphin	0	7	0	56	84.00
Delaware	0	0	0	15	15.00
Elk	0	17	0	100	168.00
Erie	0	0	0	85	85.00
Fayette	0	29	0	76	192.00
Forest	0	1	0	54	58.00
Franklin	0	9	0	36	72.00
Fulton	0	1	1	9	18.00
Greene	0	5	0	22	42.00
Huntingdon	0	11	0	61	105.00
Indiana	0	6	0	86	110.00
Jefferson	0	2	0	75	83.00
Juniata	0	7	0	34	62.00
Lackawanna	0	6	0	24	48.00
Lancaster	0	3	0	72	84.00
Lawrence	0	0	0	30	30.00
Lebanon	0	6	0	22	46.00
Lehigh	0	0	0	35	35.00
Luzerne	0	13	1	126	183.00
Lycoming	0	27	0	55	163.00
McKean	0	4	1	85	106.00
Mercer	0	0	0	49	49.00
Mifflin	0	7	0	48	76.00
Monroe	3	3	1	58	120.00
Montgomery	0	2	0	77	85.00
Montour	0	0	0	28	28.00
Northampton	0	2	0	42	50.00
Northumberland	0	1	0	40	44.00
Perry	0	3	0	35	47.00
Philadelphia	0	2	0	20	28.00
Pike	2	12	0	32	110.00
Potter	1	7	0	32	75.00
Schuylkill	0	9	0	126	162.00
Snyder	0	1	0	14	18.00
Somerset	0	13	0	188	240.00
Sullivan	2	2	1	33	76.00
Susquehanna	0	17	0	61	129.00
Tioga	0	6	0	65	89.00
Union	0	2	1	15	28.00
Venango	0	6	0	74	98.00
Warren	0	0	1	88	93.00
Washington	0	0	0	20	20.00
Wayne	0	14	1	36	97.00
Westmoreland	0	12	0	117	165.00
Wyoming	0	5	1	65	90.00
York	0	0	0	93	93.00
TOTAL	11	407	9	4,047	\$5,885.00

Number of claims for month—2,201.

BEAVER



ORDINARY GAIT





## SOME CANADIAN REMARKS ON WATERFOWL CONSERVATION

In Canada the administration of wildlife in the several provinces, except in National Parks, is a provincial responsibility. The ratification of the Migratory Birds Treaty with the consent of the Provinces, and the passing of the Migratory Birds Convention Act in 1917, changed this slightly and brought the administration of migratory birds under the jurisdiction of the Dominion.

The Sanctuary idea in North America originated in Canada with the establishment in 1887 of Last Mountain Lake Sanctuary in what is now the Province of Saskatchewan, because it was recognized that the invasion of agriculture would replace much of the interesting and valuable waterfowl life of the Prairies, unless such safety zones were established.

The outstanding work of Jack Miner in conducting a private sanctuary on his property at Kingsville, Ontario, has been recognized by the Province, by the Migratory Bird administration, and directly by the Parliament of Canada.

So long as some ducks like the Mallard are available, the amount of shooting allowed will be based on the abundance of that species, and this action spells serious depletion, or worse, for many other species. Each kind ought to be treated on its merits, and yet unfortunately this is very difficult because most hunters do not distinguish between species of ducks in the field.

—Hoyes Lloyd, Supt. of Wildlife, Canadian National Parks.



Members of the Western Pennsylvania Audubon Society watching ducks on Pymatuning refuge, Crawford County.

## DUCK ON THE LINE

By PAUL R. FURLOW

THREE of us, Nat Greely, Ephrata pharmacist, Bill Wolf, veteran interpreter, and I decided to bury the hatchet and take up the fishing rod. We agreed to play no more practical jokes on each other, least of all on Nat, who for twenty years had been the butt of jokes on every outdoor expedition we had undertaken. The armistice was to cover everything from substituting spaghetti for worms to stealing lunch. But nature took up where we left off.

We were fishing a particularly rapid trout stream in central Pennsylvania when Dame Nature took a hand. A howl from Nat, not unlike the cry of a coyote, heralded the news to Bill and me as we returned to the stream after a brief sojourn to the car. The situation explained itself.

Nat had allowed his worm bait to drift around a wooded bend in the stream. A firm tug that made his reel spin and nearly pulled the rod from his hands. Feverishly he had reeled in his line to find at the end of it—a duck.

A sense of pity swept over Nat as he saw the plight of the duck. In fact, his sense of pity was overshadowed only by the fear of being discovered in his predicament by the farmer who owned the duck. And so with the utmost skill he played the duck until it was within reach. Then stooping over, he reached for it only to have the duck take to the air. Bill and I arranged ourselves comfortably on the bank to watch the play.

Once again Nat patiently reeled in his stubborn quarry and this time, despite the showers of water from the bird's wings, managed to capture it and extricate the hook.

This episode brought to mind the occasion when Nat was the butt of a hunting hoax.

So eager was he to hunt with us after hearing our tales of prowess with the gun that he begged to accompany us. We consented but there was a twinkle in Bill's eye as he nodded.

The next day we set out for Gettysburg. Nat with a full choked gun and a supply of heavily loaded shells all of which had the shot removed.

We hadn't been long afield until a rabbit hopped slowly past Nat. Bringing the gun to his shoulder he fired, only to see when

the smoke had cleared away, that the rabbit was still hopping. The recoil had wrenched his shoulder.

Again and again he shot at the rabbits which the dogs brought to him, but all of them escaped unharmed. Meanwhile we bagged rabbits to the right and left of him.

Finally a cottontail sat down in front of Nat not ten feet away. Deliberately he took aim and shot. The rabbit frisked his whiskers and moved a yard farther away. In desperation Nat called to Bill.

"Say, Bill, how is this? Whenever you shoot, I see dirt fly. When I shoot, not even a leaf stirs."

"Oh!" exclaimed Bill. "When I shoot, you see dirt fly. When you shoot, I see dirt fly."

"I understand," replied Nat meekly, and resumed his hunting.

## DUCKS TAKE OVER FARM

About 200 wild ducks camped on the Strasburg (Lancaster County) farm of Jay Bachman are giving farmer Bachman the horse laugh, the razzberries, or whatever ducks give when they feel nice and independent.

They squat about his farm and they eat his food up and he can't do a thing about it. The ducks are protected by an international migratory bird treaty between Canada and the United States which limits shooting to a couple of dozen of them a season.

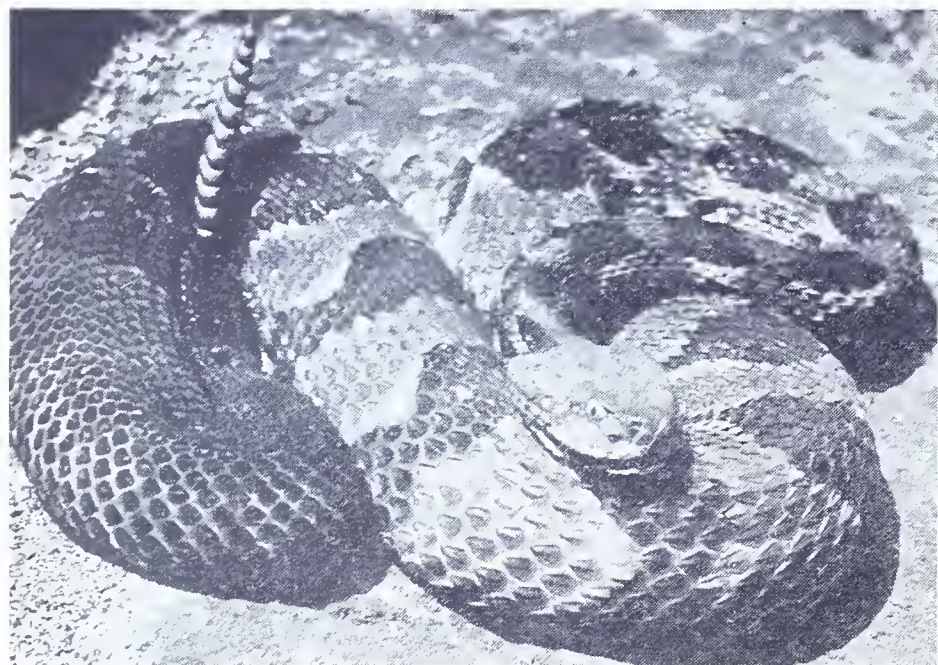
Jay Bachman would like them to move elsewhere but the ducks just won't do it. Bachman kills his couple of dozen legally each year but it doesn't make much of a dent in the flock.

"If it keeps on like this," he says, "I'll be ducked out of house and home."

Israel Berry, West Cain, Chester County, well-known farmer and bird authority, tells an interesting story of a very smart crow. For several weeks Berry did some detective work when he discovered a crow taking eggs from a turkey nest in the field. Berry took one of the eggs from the nest, picked it and inserted sufficient poison therein. He also left a good egg in with the one that was intended for the crow. Next day the crow again robbed the nest of an egg, taking the good one while the turkey ate the poisoned one and died.



## A BIT ABOUT SNAKES



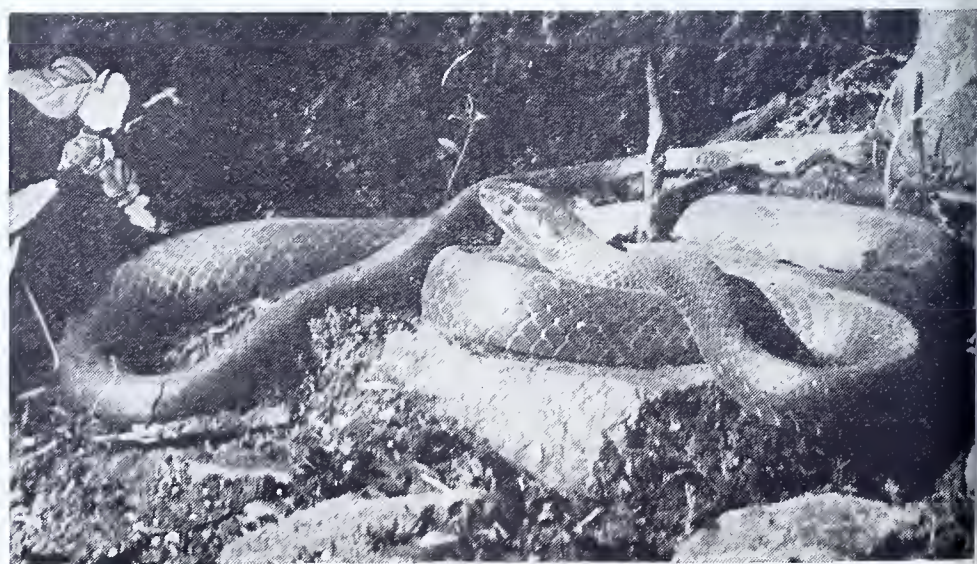
Above: The rattler has a pit between the eye and nostril and a vertical eye pupil. Poisonous snakes have but one row of plates on the under side of the tail.

Below: Head of blacksnake. No pit between eye and nostril. Round eye pupils. No fangs. Non-poisonous snakes have two rows of plates under side of tail.



Above: Fangs of the rattler. When these are shed or pulled out accessory fangs grow in and replace them.

Below: Blacksnake. He is a nest robber although at the same time he destroys many rats and mice. Rattlers and copperheads also are beneficial and kill many undesirable rodents.







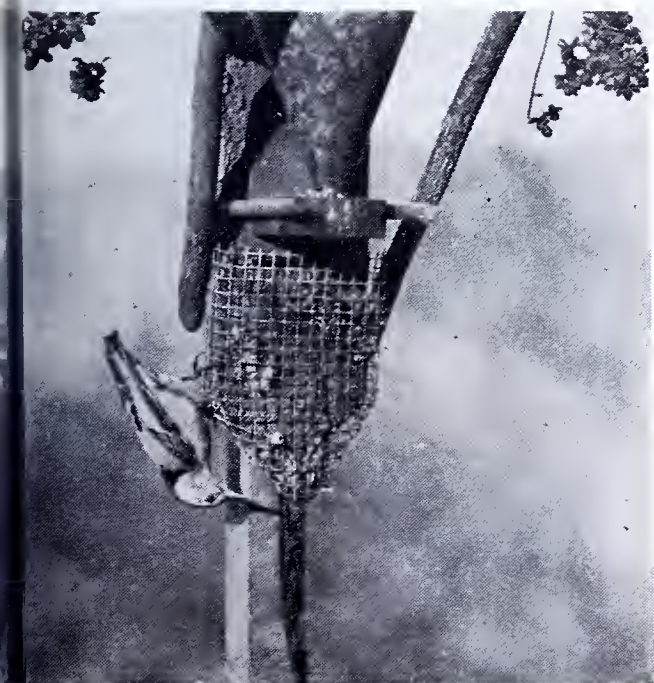
### BIRD LORE

Photos by Mrs. Frank Pagan,  
Wellsboro, Pa.

Left: Tufted Titmouse at  
food counter.

Right: White-crowned  
Sparrow at counter of sun-  
flower seeds.

Left center: Purple Finches  
at same counter. Right:  
Evening Grosbeak.

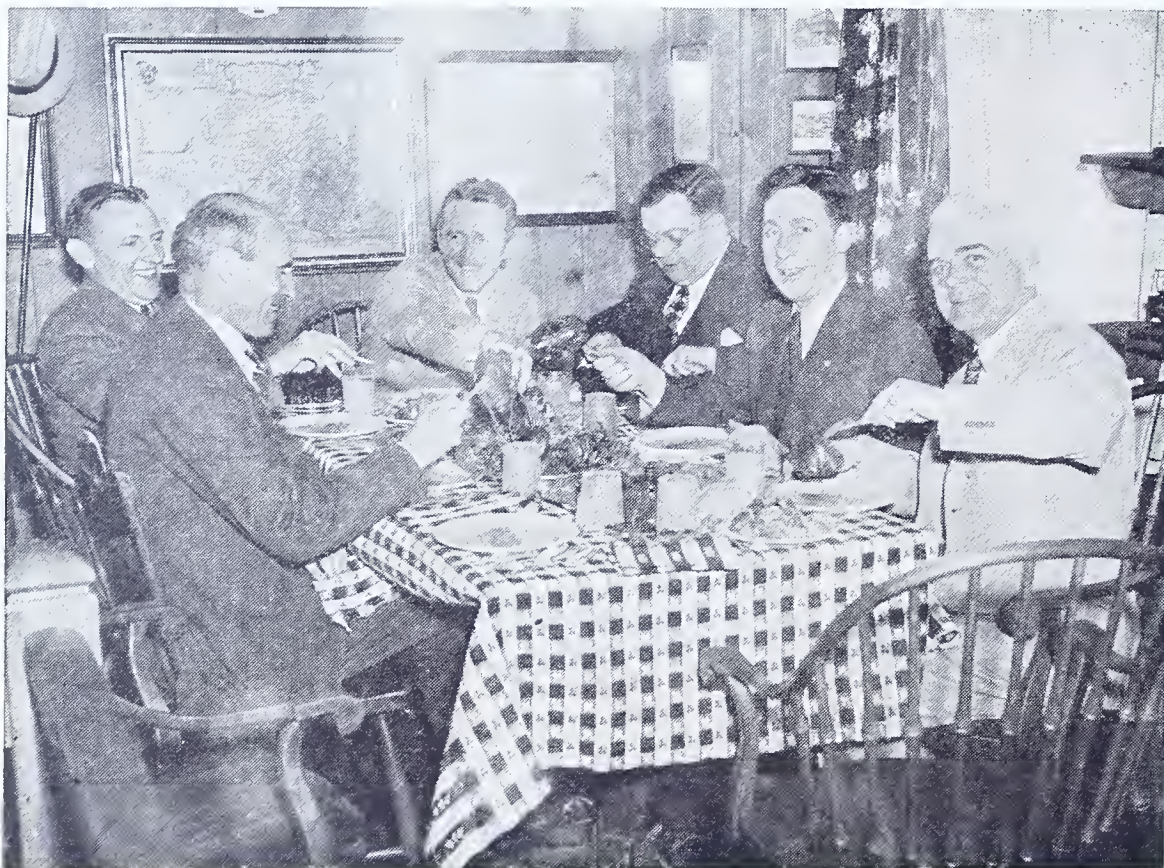


Left: White-breasted Nut-  
catches, the up-side-downers  
of the bird world.

Right: Hairy Woodpecker  
searching for grubs.







Major Albert H. Stackpole, prominent sportsman, and guests at crow dinner, Penn Harris Hotel, Harrisburg.

## WITH THE CLUBS

County Commissioners of Lehigh County announced that the Federal Government has taken over the lease on that portion of the Trexler-Lehigh County Game Refuge. Last year the area was occupied by a CCC camp. It will be developed into a National Park. The late General Trexler bequeathed the cite to the city of Allentown. All the game and fish associations in the County of Lehigh are supporting the project.

The Coatesville Anglers Association held its annual meeting in Coatesville May 22. Able speakers from the Game & Fish departments gave interesting talks. The club reports thousands of all species of trout will be ready for distribution from their rearing ponds this Fall.

The York County Gun Club announces two registered shoots over their traps at Haines Park, Lincoln Highway East, York, Pa., on July 4th and October 12th.

The L. S. L. Sportsmen's Association held a big meeting at Orrstown recently at which Samuel H. Price, Huntingdon County Game Protector, was principal speaker.

Among other things Mr. Price said: "It takes disasters such as floods, tornadoes, and snow storms to bring out the real good in humanity, and the work sportsmen carried on during these severe tests is a splendid example."

Sunday, June 28, the Boyertown Rod & Gun Club, Inc., will hold a clay target regis-

tered shoot, 100 birds. A. B. Leidy, secretary, is looking forward to a big field of shooters.

The Houtzdale Sportsmen's Association will hold a big field day on Thursday, June 18. Among events will be trap shooting, fly and plug casting, dog show, dancing, etc.

Shamokin is after the 1937 State Shoot and it is understood that the South End Gun Club, Reading, desires the tournament in 1938. The decision for next year's classic will be reached at the annual meeting of the Pennsylvania State Trap Shooting Association to be held in Bradford this year.

The Holmesburg Fish and Game Protective Association, Bucks County, is planning an extensive feeding and game restocking program for 1936-37. They are off to a good start, and other clubs should follow suit. It does not pay to wait until the last minute, as experience during the past winter proved.

Under the auspices of the Southern Chester County Izaak Walton League, Admiral Byrd lectured before several thousand persons in Kennett Square recently.

The Northwestern Trap Shooting Association is composed of a live bunch of marksmen. Already they have arranged six registered shoots in Scranton.

## HERE AND

Major Nicholas Biddle, President of the Board, and Dr. William H. Moore, former member, were guests of honor at the eighteenth annual banquet of the Burlington County Game Protective League, Moorestown, New Jersey.

Over five hundred enthusiastic New Jerseyans were present and were most royally entertained.

Among other things Harold Green, curator of African exhibits of the Academy of Natural Sciences, Philadelphia, presented some interesting pictures taken on the dark continent. Major Biddle, who also hunted extensively in Africa and other parts of the world, outlined some of Pennsylvania's problems, particularly, the deer situation.

### WILL PROVIDE UNIQUE BIRD HOMES

Dr. B. D. Hetrick, enthusiastic and generous sportsman of Butler, Pennsylvania, has a quantity of seeds for growing large gourds which can be used for bird houses. He will give them to the first five hundred persons sending him a stamped self-addressed envelope. He will also include mimeographed instructions for raising the gourds, curing the fruit and making bird houses from them. They will last six or seven seasons if properly made, Dr. Hetrick avers.

### MECHANICSBURG SPORTSMEN'S ASSOCIATION ACTIVE

The Mechanicsburg Sportsmen's Protective Association did a wonderful work during 1935 to better hunting and fishing conditions in Cumberland County. Among other things the club distributed 6,000 brook trout, 2,000 rainbow trout, 700 smallmouth black bass and 500 suckers. They also released 90 ringneck pheasants, 60 quail, and 19 crates of rabbits furnished by the Game Commission and 2 crates of rabbits which they purchased themselves. A stream improvement project was completed through the services of the W. P. A., a crow shooting campaign was conducted, a sportsman-farmer program was carried on, and two small game refuges were established on lands donated by sympathetic landowners.

The very active Secretary of this group is Elwood Straub, Mechanicsburg. Their club slogan is "Every member get a member." Such a slogan could well be applied to the PENNSYLVANIA GAME NEWS. Why not try it? "Every reader get a reader."

In the grand finals of the thirteenth Semi-Annual Field Trial for coon dogs, held at Cedar Top Gun Club recently under the auspices of the Berks County Coon Hunter's Association near Reading, the winners were as follows:

1st tree #35, "Phantom Red," Joe Schreiner, New Brunswick, N. J.; 2nd tree, #41, "The Schoolmaster," Clayton Richardson, Memphis, N. Y.; 1st line #11, "Colonel," C. O. Jeffries, Port Henry, N. Y.



# HERE WITH THE SPORTSMEN

## CROW FOR DINNER

SOME of us can't help feeling deeply troubled over the movement, initiated in Oklahoma during the winter months, to label the common crow as a game bird and have him accepted as a table delicacy. The crow is such a noisy citizen, so full of guile and other human characteristics, so adept in the strategy of self-protection, that to eat him must be rather like eating your favorite congressman.

The idea that crows are edible was first advanced by a Tulsa physician, who invited newspapermen of that city to a banquet, fed them crow meat and told them afterward what they had been eating. The good doctor's belief is that once the crow is established as a game bird, the guns will start booming and presently a pest of first magnitude will be eliminated. Perhaps he is right. Yet one pauses, shuddering a little, on the brink of the thought. After we have destroyed the crow by culinary methods, how can we be sure that some zealot won't ask us to extend the new doctrine to other national pests—the chinch bug, for example, or the coyote or the codling moth? Not to mention the autograph collector and the Japanese beetle.

At any rate, the Tulsa heresy has caught on surprisingly. Throughout Oklahoma and adjoining states sportsmen are holding crow dinners this spring. An Oklahoma produce house reports that it already sold more than 2000 dressed crow carcasses, chiefly to the hotels, and that the demand is still brisk. Midwestern newspapers are full of praise for the black-feathered fellow and the clean life he leads. The thing begins to have the earmarks of a third-party movement.

As soon as someone thinks of it, the crow doubtless will be given some official recognition. It was in the year 1611 that King James I of England—connoisseur of fine food that he was—struck a juicy roast of beef with the flat of his sword and dubbed it "Sir Loin." Striking a crow across the withers with a sword might not be a bad idea, particularly if the bird selected for the honor happened to be an ancient character that needed tenderizing; but in all probability the current shortage of kings in Oklahoma will rule out this ceremony. There is, however, no dearth of gold medals, nor of senators to present them.

No recipe for cooking crow has as yet drifted into this office, but one assumes the carcass is massaged with rubbing alcohol or shaving cream before putting over the fire. It is not for us to deny that the crow is edible, of course, but in case some kind host invites us to partake, we hope he won't think it too rude if we beg to be allowed to eat the aluminum broiling pan instead.

Brooke Dolan, 3rd, Villanova explorer, in charge of an Academy of Natural Sciences expedition, home from Tibet, brought back some very rare specimens of animals. Included in the trophies were a full series of McNeil deer which were regarded as extinct, and a wild Tibetan Yak. Dr. Dolan spent two years on the Tibetan Plateau, known as the "Roof of the World."

## SAXTON BIRD DAY

The people of Saxton, Bedford County, and especially the school children, are to be highly commended for the splendid Bird Day program which they sponsored recently.

The feature of the program was a bird house building contest in which 103 houses were entered.

Saxton is the home of W. G. Fluke, member of the Game Commission, and it was mostly through his interest and enthusiasm that the program was sponsored.

The Editor of the GAME NEWS helped judge the winners of the bird house contest and his assistant, Dr. C. S. Apgar, concluded the program with 4 reels of motion pictures.

## LITITZ SPORTSMEN ACTIVE

The 1935 annual report of the Lititz Sportsmen's Association, Lancaster County, is very interesting. The organization built 40 winter feeding shelters and distributed 3,420 lbs. of grain. Educational talks on feeding were given to eight high schools.

The club successfully hatched and released 206 ringneck pheasants from 504 eggs furnished by the Game Commission. They also released 704 twelve-week old pheasants which they raised from day-old chicks. They purchased 155 cottontail rabbits at their own expense and released 286 furnished by the Commonwealth.

The club held a Farm Show contest during October, donating five prizes. The first, a 500 lb. steer, went to Roy Mease, Lancaster; the second, a Winchester Pump Gun, was won by Charles Kling, of Lititz; S. N. Myers, also of Lititz, won the third prize, a .22 repeating gun; a gunning coat was awarded to Joseph Yeager, of Lancaster, as the fourth prize; and the fifth, a .22 single-shot rifle, was won by George Royer, of Lititz.

A special contest was held for sportsmen with prizes being awarded to Paul Doster for shooting a deer with the largest number of points; Dervin Runk for catching the largest bass—19" long, weighing 3 lbs.; Roy Stark for catching the largest salmon—26½" long, weighing 6½ lbs.; Earl Minnich for shooting the largest number of crows—628; George Royer for shooting the second largest number of crows—327; and Isaac Weidman for shooting the third largest number of crows—262.

The 238 members comprising this club killed the following game during 1935: 3 deer, 215 rabbits, 12 quail, 20 squirrels, 63 pheasants, 47 gray squirrels, and 10 ruffed grouse. They also killed 28 stray house cats and 1 red fox.

## NEW CLUBS

The Kempton Rod and Gun Club, Kempton, Pa., organized recently with Mr. Leroy Schollenberger as Secretary.

The newly organized Mountain, Field, and Stream Club of Roxbury, Pa., recently held its first annual banquet with about 150 members and friends in attendance.

## WANT EARLY TRAINING SEASON

Sentiment among field trial enthusiasts and sportsmen generally during the past season apparently was in favor of extending the training period another month in the spring and knocking off a month in the fall. The reason for this suggestion, from what we can gather, seems to be that dog owners feel there is less game, particularly young game birds and animals in the field to be disturbed by dogs in the spring than there is in the fall, also fewer dogs afield to cause the disturbance. After all, they say, weather conditions are unfit for training before September 15th.

This sentiment is worthy of serious consideration and it is suggested that our readers ponder over it and discuss the suggestion among themselves between now and the next legislature.

A hunter in the State of Delaware has invented a device that calls crows to him and he declares that last month (May) he killed upwards of 2,000.



Refuge Keeper, W. B. Wells, McHoopany, Pa., with deer which he rescued when it sank deep in the mud of a local swamp.

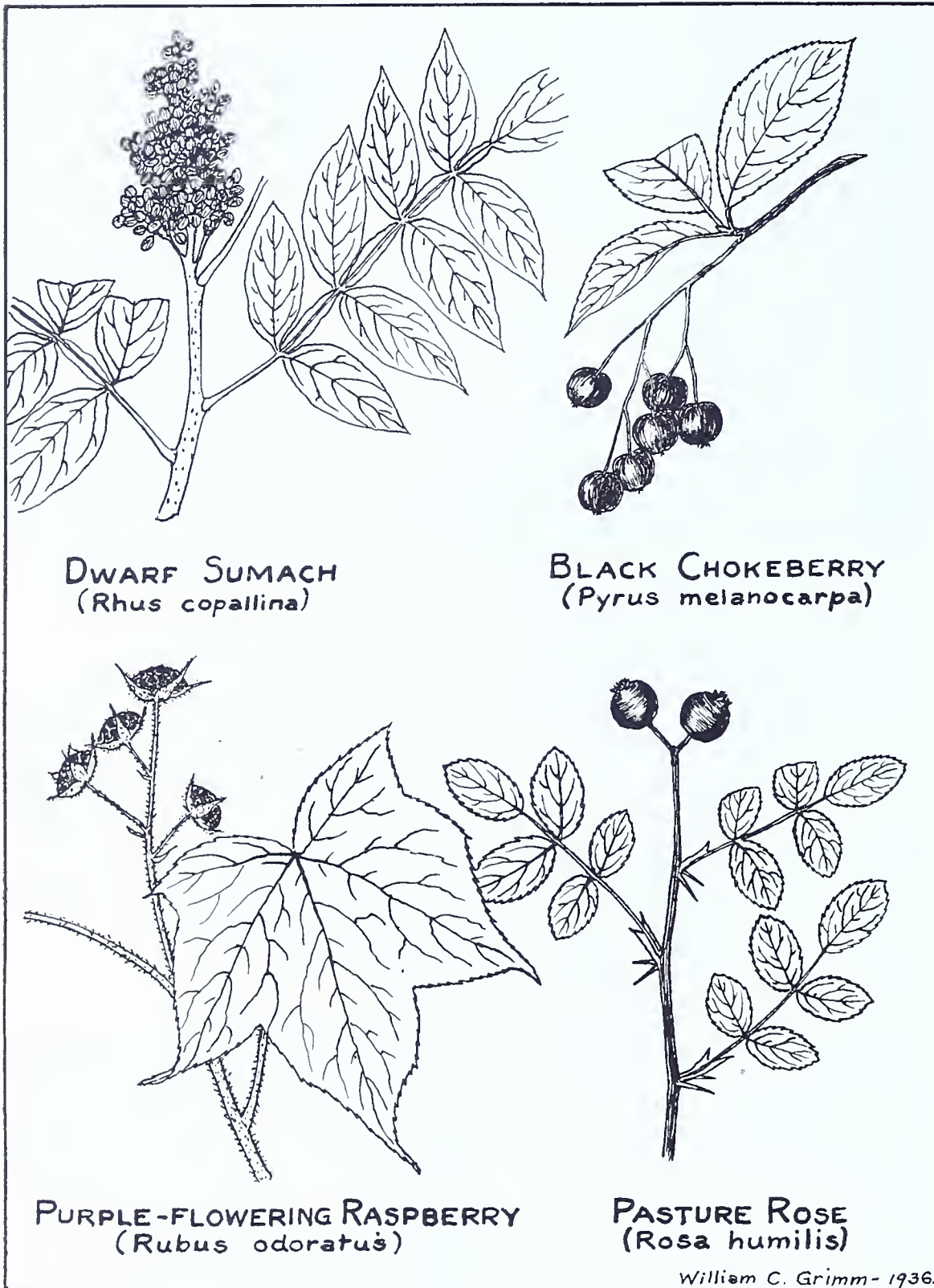
## NOTICE

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# Planting Food For Wildlife

By William C. Grimm



The number of points on a buck's antlers is no index of his age, concludes Victor H. Cahalane, Michigan biologist, after attempting to correlate the wear of the teeth with the size of antlers. He did find that the diameter of the antlers one-half inch above the burr, furnishes a fairly dependable index for Michigan white-tail deer.

If the diameter is from 18 to 19.9 millimeters, the age is 1½ years; from 20 to 25.9 mm. 80 percent are 2½ years; from 26 to 27.9 mm., two-thirds will be 2½ years, the remainder, 3½ to 4½ years; from 34 to 37.9 mm. one-half will be from 3½ to 4½ years, and the other half will join the next group, measuring 38 mm. and over, which are 5½ years and above.

Smith Harris, a farmer living near DuBois, fed a covey of quail on his barn floor last winter. One day a Cooper's hawk flew in and killed and ate one of the birds. Harris quickly shut the door and killed the hawk with a club. Its crop contained the entire quail, feet and all. This goes to prove that, when ravenously hungry, birds of prey will often take long chances.

J. L. Baker, Harrisburg, killed a blacksnake in the act of devouring a clutch of grouse eggs, and one which had robbed a pewee's nest and eaten two of the young.

EDITOR'S NOTE: This is the fourth of a series of articles by Mr. Grimm on what, how, when and where to plant food bearing trees and shrubs for game.

**Dwarf Sumach:** Resembles other sumachs as to fruit. Leaflets have entire margins and there are winged projections along the main stalk between the leaflets.

**Black Chokeberry:** Medium-sized shrub. Leaves alternate with finely-toothed margins; quite smooth. Fruit berry-like, about ¼ inch in diameter, nearly black.

**Purple-flowering Raspberry:** Stems not prickly but covered with glandular hairs. Leaves simple, or 3 - 5 lobed, and finely toothed. Flowers rose-like. Very attractive ornamental; also provides some food for birds.

**Wild or Pasture Rose:** A low shrub armed with fine straight prickles. Leaflets 5 to 7, finely toothed. Fruit nearly round, orange-red. The common wild rose. The wild roses are attractive and the fruits are eaten by some birds. Other native wild roses are: Smooth Meadow Rose and Swamp Rose.

## BOOKS, PAMPHLETS, PAPERS

The American Nature Association, Washington, D. C., publishes some very interesting pamphlets which every sportsman and nature lover should possess.

Two of the most interesting are "Our Disappearing Fur-Bearers" and "A Plea For Our Hawks and Owls." Both are fully illustrated in color.

The U. S. Biological Survey, Washington, D. C., also distributes some very excellent publications of interest to both farmers and sportsmen.

Some of these are as follows:

"Mouse Control In Field and Orchard"—Farmers' bulletin No. 1397.

"How To Make A Cat Trap"—Leaflet No. 50.

"Rat Proofing Buildings and Premises"—Bulletin No. 1638.

"Rat Control"—Bulletin No. 1533.

"Rabbits In Relation To Trees and Farm Crops"—Bulletin No. 702.

"Mink Raising"—Leaflet No. 8.

"Rabies (Hpdrophobia)"—Bulletin No. 449.

"Food of Some Well Known Birds of Home and Garden"—Bulletin No. 506.

"Some Useful Birds to the Farmer"—Bulletin No. 630.

"Local Bird Refuges"—Bulletin No. 1644.

"Blackbird Control in Corn Fields"—Biological Survey Leaflet.

"English Sparrow Control"—Leaflet No. 61.

"Bird Houses and How to Build Them"—Farmers' Bulletin 609.

A list of external parasites from birds of the eastern part of the United States by Dr. Harold S. Peters, Bureau of Biological Survey.

The Aughwick Valley Game, Fish and Forestry Association, Mt. Union, which has been organized a little over one year, now has a membership of over 700 members, and is still going strong.

William C. Grimm - 1936.



## SPORTSMEN AWAKEN!

NOTE: Following is a letter written to Nicholas Biddle, President of the Board, by Major John V. Rowan, U.S.A., Philadelphia. What Major Rowan says is only too true.

I received this morning and read with deep interest and thorough appreciation the pamphlet by Senator Guffey covering national conservation planning that you were kind enough to mail to me.

The nation that ignores this subject invites national disaster. History is replete with lessons on this score. Where now are the "Cedars of Lebanon"? Wandering tribes of nomads now roam over the plains surrounding the Tigris and Euphrates that once supported the world's greatest nations in opulent luxury.

Less than a century has elapsed since Pennsylvania sacrificed her leadership in lumbering, fishing and other industries, the perpetuity of which depended solely on intelligent conservation. Two generations ago, this great state supplied the United States with ninety-five per cent of its oil, whereas today your oil production, expensively pumped, supplies less than five per cent. Coal resources of illimitable value have recklessly been squandered and both capital and labor in this field of endeavor face a doubtful future.

The lumber industry, moving to Minnesota, Michigan, Wisconsin, etc., proceeded to literally "mine" the timber off, rather than to wisely conserve it by removing only mature trees and disposing of slashings. The accumulated debris caused fires that destroyed both forests and soil. So, since the beginning of the current century, we witness Minnehaha Falls, the "laughing waters" of Hiawatha, dry sand dunes in summer and rushing torrents of uncontrolled fury in the Spring. The rainfall is diminishing, crop failures are common, even the surface level of water has dropped from ten to as high as fifty feet. Another so-called "bread basket" of the world is seemingly doomed. Man only is to blame.

Terrapin, once so common in the East that laws existed prohibiting planters from feeding it to their workers over three times a week is now an expensive and rare delicacy. Wild pigeons were known to have been delivered to Baltimore in car-load lots. Today not one survives. Oysters nearly disappeared before we awakened and crabs are now largely obtained from Maine and other distant points.

In the Pacific Northwest, our last great timber reserve, where rolls the mighty Columbia, you may see fires that rival descriptions in *Dante's Inferno*, roaring perpetually alongside the mightiest river on the west coast of both Americas. Why? Simply because the lumbermen will only use "dimensional stuff" and burn all pieces not conforming thereto. What criminal waste leading to woeful want, what asinine folly! We should awake before it is too late!

## RIFLE STOLEN

A few days prior to the past deer season the hunting camp of Mr. F. W. Powell, 119 West Ohio Street, North Side, Pittsburgh, Pa., which is located four miles from Rockton, Clearfield Co., was broken into and a Winchester Rifle, No. 132220, belonging to the caretaker was stolen.

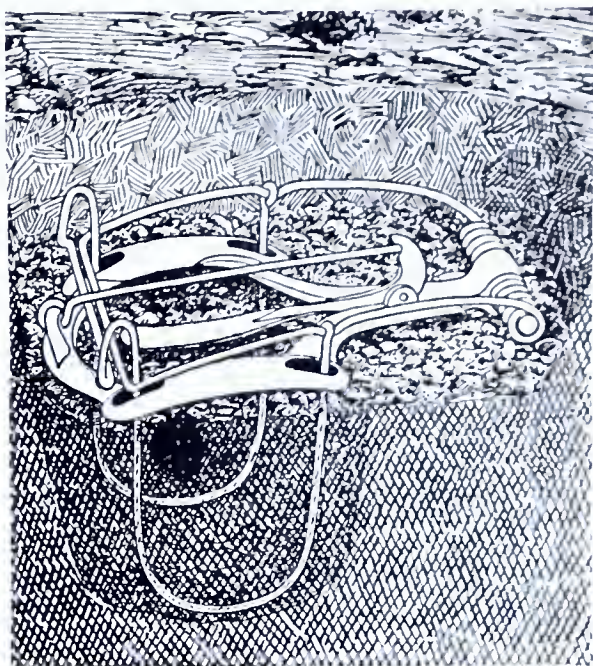
Should this rifle be located, please notify Mr. John Collum, c/o May White, Rockton, Pa.

# Controlling the Mole

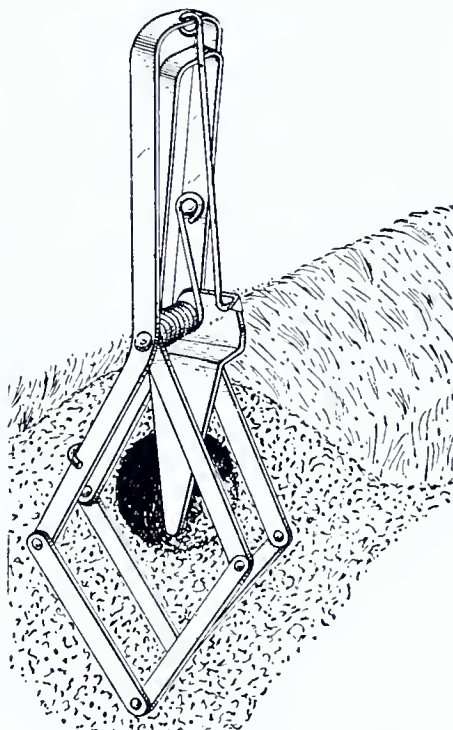
**M**OLES are comparatively difficult to control, but one who is patient, persevering, and somewhat skillful can catch or destroy them in a number of ways.

## Trapping

Trapping is the most universally applicable and satisfactory method of mole control, but it is successful only if the habits and instincts of the mole are carefully considered. The suspicion of the mole, for instance, is aroused when its sensitive nose encounters anything foreign in its runway, and it will immediately back up and burrow around or under an ordinary trap set in its tunnel. It is not suspicious of dirt blocking the runway, however, as its burrow is frequently closed by farm machinery, and by man and large animals stepping on it. The mole will immediately push its way into such a dirt blockade, reopen it, and continue on its way. This habit provides opportunity for using a specially designed trap that straddles, encircles, or is held suspended above the runway, the trigger pan resting on or hidden in a dirt blockade. Under such conditions the unsuspecting mole cannot detect the presence of the trap, and in pushing



A choker-loop trap, in position at one of the deeper runways of a mole's system of borrows. The loops must encircle the runway.



A diamond-jaw trap, set. The runway is back of the trigger. Moving the trigger in action releases the spring.

into the dirt obstruction it either lifts the trigger pan or pushes the dirt against the hidden trigger arm and thus releases the trap spring. If this general principle is understood by the trapper it will greatly simplify his efforts.

Another fundamental condition to be remembered is that the mole is most sensitive to an unnatural environment. For this reason the careful or experienced trapper never tears up large or numerous sections of the mole burrow in attempting to locate the favorable setting for a trap. The trapper should also bear in mind that a poorly set trap is a detour sign for the ever-suspicious mole.

The selection of a frequently used runway for a trap set is of prime importance. East of the Rocky Mountains most of the traps will have to be placed in the hunting tunnels, which are close to the surface and are indicated by the conspicuous ridges. It is to be remembered that these surface runways are made for the primary purpose of finding food. Many of them are therefore not used more than once; others, however, serve as highways and are used regularly. Ordinarily a runway that takes a more or less straight course for some distance, or seems to connect two systems of workings, will be in constant use. On the other hand, a tunnel that has mouse holes or breaks opening into it is not being used, as a mole invariably repairs any such surface openings. Thus the trapper can often determine the used tunnels by poking a small hole into all on the area and noting later, usually within a few hours, which ones have been closed. In large fields the runs in use may to be found by driving a wagon or automobile back and forth across the area, flattening the mole ridges at intervals of 50 to 100 feet; the following day the regularly used runways will be raised again.

When the trapper can locate the deeper runs which often are highways used by many individuals, he may catch a number of moles by continued use of traps in the same place. Such deeper tunnels are usually 3 to 12 inches or more below the surface, along fence lines or ridges in open fields, or at crossings from sodded to cultivated ground. Experiments have shown that in such cases an entire 6-acre field can be successfully treated by setting traps along the fence rows.

As moles are active throughout the year they may be trapped at any season, although it is not practical to carry on operations when the ground is frozen or exceedingly dry. The best time to trap is when fresh signs of mole activity are noted.



# The C C C in Conservation

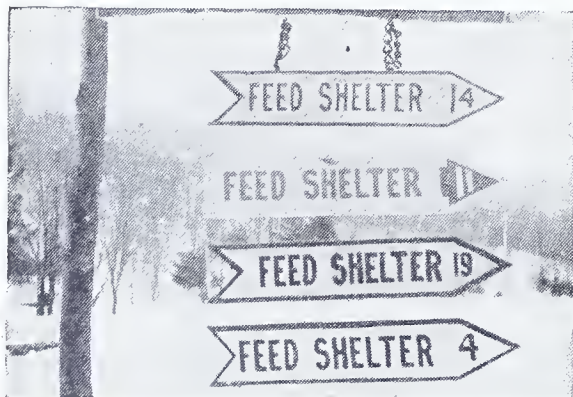
By H. P. Kauffman

**C**AMP MORTON, located in the most desolate but beautiful part of the North Mountain Region, Sullivan County, is in the center of a work area of 35,541 acres of State Game Land.

It is one of the most outstanding camps in Pennsylvania and recently won second place in the Corp Area contest. Hard work on the part of the enrollees after hours, with the cooperation of the State Personnel and Army officers, helped make this possible.

This camp was established to provide a better system of Forest Protection and Management, to feed and protect wildlife, to plant food-bearing trees and shrubs, to secure an increased yield on the timber areas, and to protect the White Pine from the attack of the Blister Rust. In time other projects were added.

Roads and trails are most necessary in carrying out the Conservation Program as they make it possible to easily reach all areas. And so, during the first two years, much time was spent on these projects. Now there are 35 miles of truck trails over the



area. From points along these roads foot trails have been cut that extend into the more remote regions. Fifty miles of foot trails have opened up the area for better forest fire protection and management. An excellent dirt road now connects State Route No. 115 with the North Mountain Fire Tower; also, the Jamison City Road has been extended to the Ricketts Estate. Eleven bridges were built to complete the roads.

Protection of wildlife has become an outstanding phase of the work of the camp. During the past winter over 100 game shelters were constructed and food was



Ringneck Pheasants at one of many feedings shelters erected by boys of Camp Morton.

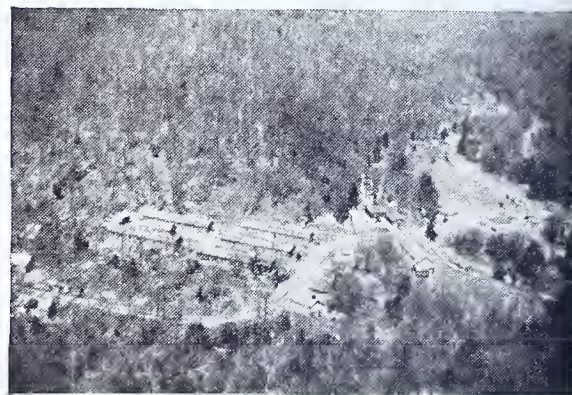
taken to them every week. Our records show that grouse, rabbits, squirrel and deer frequented the shelters. Over 250 bushels of corn on the cob, scratch feed, oats and bread were distributed. This food was secured from the Game Commission and from many private individuals who were solicited by the camp officials and enrollees. A check on 40 shelters over a period of two months showed that rabbits visited 37; squirrels, 36; grouse frequented 30 and signs of deer were found at 15 shelters.

Reforestation has been carried on to provide feed and shelter for game and to increase the value of the timber crop. To date, 60,000 seedlings of pine, spruce, and oak have been planted. These evergreen seedlings will in a very few years materially increase the winter cover on the area for grouse and deer particularly. It is planned during the next year to plant an additional supply of evergreens, particularly along stream banks, ravines and hollows where game customarily congregates during the winter months. It is possible that a small nursery will be established to grow berry and nut producing trees and shrubs for planting on the Game Lands to supplement the natural game food supply.

Fifty acres of land are being cleared preparatory for sowing them with buckwheat or other grains. Also other areas are being cleared to provide berry patches as food for wildlife. Release cuttings in the vicinity of grape vines and other game food plants have been conducted for the purpose of providing many natural feeding areas. The releasing of these plants per-

mits sunlight to enter, thereby increasing the fruiting capacity.

Timber Stand Improvement is excellent winter work. This involves the taking out of the undesirable species and thus increases the annual growth of the remaining trees. Two hundred acres have been



treated in this manner. In addition it promotes sprout growth which provides more deer food and better cover for other game.

Seven miles of Stream Improvement have been completed. This work consists of building pole and log dams, providing artificial feeding grounds and other things necessary for the improvement of our streams.

In addition, many minor projects were completed, showing that in spite of floods, heavy snowfall, epidemics, and many other obstacles, Camp Morton has accomplished much in the way of Conservation.

A cordial invitation is extended to the public to visit this camp and its projects.

## NOTES

Of all the ammunition sold in the United States but 8 percent is for trap-shooting. There was a time when Pennsylvania had 400 trap-shooting clubs, but today there are about 180 such organizations. "Skeet" is supplanting straight trap-shooting in many places.

Those interested in the protection of game, song and insectivorous birds are urged to contact their rural friends and ask them to avoid burning off grass fields and brush piles during the months of April, May and June.

Kaffir corn furnishes most ideal food for game during the winter months. It grows

## STATE SHOOT POSTPONED

The state trap shoot originally scheduled for June 11 to 14 at Bradford, Pa., has been changed to June 24 to 27.

## ATTENTION!

Beginning with the July issue the GAME NEWS will carry a Question and Answer column. Everyone is urged to contribute to the success of this new undertaking.

from six to ten feet high, the top bending over to about half the length of the stalk. 4-H boys and girls are urged to plant some Kaffir corn this summer.

Trout fishermen can make many observations of game, and such information will be welcomed by the Board of Game Commissioners. County Game Protectors will gladly accept all such data.

"Wildcats rarely leap from trees onto the backs of deer. I have traced as many as twenty-five instances where the cat sprang from a bank or a rock, but never from a tree, except possibly from a fallen one"—Chauncey Logue, State Trapper.



## THE WITNESS

"Of all unfortunate people in this world, none are more entitled to sympathy and commiseration than those whom circumstances oblige to appear upon the witness stand in court. You are called to the stand and place your hand upon a copy of the Scriptures in sheepskin binding, with a cross on the one side and none on the other, to accommodate either variety of the Christian faith. You are then arraigned before two legal gentlemen, one of whom smiles at you blandly because you are on his side, the other eyeing you savagely for the opposite reason. The gentleman who smiles proceeds to pump you of all you know; and having squeezed all he wants out of you, hands you over to the other, who proceeds to show you that you are entirely mistaken in all your supposition; that you never saw anything you have sworn to; that you never saw the defendant in your life; in short, that you have committed direct perjury. He wants to know if you have ever been in state prison, and takes your denial with the air of a man who thinks you ought to have been there, asking all the questions over again in different ways; and tells you with an awe inspiring severity, to be very careful what you say. He wants to know if he understood you to say so and so, and also wants to know whether you meant something else. Having bullied and scared you out of your wits, and convicted you in the eye of the jury of prevarication, he lets you go. By and by everybody you have fallen out with is put on the stand to swear that you are the biggest scoundrel they ever knew, and not to be believed under oath. Then the opposing counsel, in summing up, paints your moral photograph to the jury as a character fit to be handed down to time as the type of infamy—as a man who has conspired against innocence and virtue, and stands convicted of the attempt. The judge in his charge tells the jury if they believe your testimony, etc., indicating that there is even a JUDICIAL doubt of your veracity; and you go home to your wife and family, neighbors and acquaintances, a suspected man—all because of your accidental presence on an unfortunate occasion!"

(Extract from "The Art of Cross-Examination," by Francis L. Wellman)

Footprints of a ruffed grouse are placed one in front of the other, forming a direct line.

# Our Feathered Friends

By George Miksch Sutton

From far over the wide meadows drifts a faint sound of bells. And there are whispers of tiny pipes and flutes, and shrill piccolos. All the morning seems to be dripping sounds of exquisite texture, sounds such as sparkle of the dew might make—if dew sparkles ever made music. The grasses move in the slight wind, and their movement causes very small sounds, which harmonize, somehow, with the distant fairy band that is playing. The leaves of the wild mustard and the great soft mullein rustle; and even those dry sounds become part of the musical ensemble which seems to be drifting in from everywhere. Then, as the wind dies, the faint bells cease, and the many distant flutes and piccolos are heard no more.

All at once, through the bright effulgence of the sunshine there circles toward us a small black bird. His wings shiver and tremble in the light. Fearless and reckless he is, this little fellow who is scarcely larger than a sparrow. And verily, he is a braggart. "Phew, phew," he says, in tones that sound a trifle angry, and least of all, afraid.

Then as though the white clouds so low-flying above the meadows had suddenly dropped a musical bomb among us, the song begins. Ah. Such a profligate outburst, and all from the throat of a small black bird, but little larger than a sparrow. He circles about us spluttering and clinking. The song is rollicking and gay; it is careless and carefree; and the singer is so overcome by the sheer prodigality of the music that he drifts lower and lower, legs dangling limp, and wings beating slower and ever more slowly, until he rests lightly among the grass tops, perching nowhere, simply resting on the strong stems, wings limply spread, and feet dangling, oh—anywhere. But on he sings and sings, and his wings quiver ecstatically as he puts back his head and purrs and splutters.

You wonderful black and white Bobolink!

We move closer and he continues to loll in the grasses, muttering "Phew, phew," perhaps in lazy contempt. And then, lest we step on his shining tail, or touch his



silken wings, he drifts away, wings fluttering so easily, so effortlessly that it seems that flying must certainly be no work at all.

He is a black and white beauty. And somehow as he twinkles off above the mustard flowers he seems rather like a gay dandy who has seen much night-life among scented cabarets, and who has forgotten, in his careless drowsiness, to take off his evening clothes. Evening clothes in the morning—and on such a morning too!

We hate to leave the wide meadows, where even now the sound of the fairy orchestra wanders over to us from the little valleys of green grasses where the Bobolinks are singing. A meadowlark whistles; but his high notes seem thin and full of effort, and as he flies away he seems nervous and rather wooden. A flicker flashes by, and drones his long series of yelps from a telephone pole. And a little grasshopper sparrow buzzes the queerest of songs from a dead weed stalk. But nowhere is there buoyancy and charm save with the little black and white concertist who is now circling above his nest.

As we leave the field he comes to bid farewell. And there is nothing but unrestrained joy in his parting. He quivers and trembles and drags his feet among the grasses, and as we move away he comes nearer and nearer until, as we step upon the road he hovers only a few feet above us carolling gaily, "Happy morning to you; but you'd better leave my meadow before I get cross."

## WHAT IS THE STATUS OF NORTH AMERICA'S NATURAL RESOURCES?

North America's natural resources have been wasted, looted, and despoiled

A partial picture of man's stewardship of Nature's bounty, due wholly to lack of foresight and constructive management, reveals the account *far in the red*.

### LOSS!

1. 697,000,000 acres of original forest denuded.
2. 100,000,000 acres of original wildlife breeding grounds drained.
3. 85% of our lakes and streams polluted by industries and municipalities.
4. 173,000,000 acres of remaining public domain lands overgrazed and denuded.
5. Eight wildlife species extinct; others reduced to verge of extinction; waterfowl supply a fraction of former abundance; farm and forest game diminished; valuable fur-bearers endangered; the food and game fish supply

seriously diminished.

### PROFIT?

1. 85,000,000 acres barren waste; 90,000,000 acres tax delinquent; 44,000,000 acres eroded beyond redemption, recurrent devastating floods, game ranges reduced, fishing waters impaired. Hundreds of communities pauperized.
2. Water tables lowered; floods, droughts, and dust storms; decrease in waterfowl, fur-bearers, and fish life. More than half the land drained worthless for agriculture, drainage bonds defaulted, thousands of citizens pauperized.

3. Annual additional cost for pure water supply to communities and industries more than \$1,000,000,000; taxes materially increased; property values impaired; fish and other aquatic life destroyed; heavy annual toll on waterfowl supply; recreational facilities ruined; and shipping endangered and costs increased.

4. More floods, droughts, and dust storms; irrigation reservoirs being ruined by silting; range for wildlife usurped and destroyed.
5. Progressively restricted hunting and fishing seasons; constantly reduced bags and creels; fewer opportunities for the general public to enjoy contact with wildlife; and the annual economic return from fish, game and other wildlife seriously diminished.

Courtesy U. S. Chamber of Commerce.



# KILL THE STRAY CAT



Stray cats are the worst enemies of game and song birds during the nesting season.

## CORRELATING FOREST PRACTICES

(From page 5)

In other words, we should know what stock of game is regularly on hand in order to determine whether it is increasing or whether it is decreasing—if increasing, to know whether it is increasing too rapidly for the good of the other uses of the forest. In the larger States the making of such a census is a big undertaking. By reason of the fact that foresters have a particular interest in the numbers of game animals and game birds they should cooperate with the State Game officials in conducting such a census. This can be done by permitting the forest personnel, and CCC Camps while in existence, to assist game wardens and others in carrying on the work. The game census should be revised frequently to be of any particular benefit.

### Conclusion

It is realized that the successful correlating of silviculture, wildlife production and recreation, calls for the highest sort of skill. It is more difficult than to be just a forester, a game manager, or a park director. It is believed, however, that some degree of coordination between the three on a given area is absolutely essential for the success of any one. Foresters, by their knowledge of trees, plants and wildlife, are undoubtedly the best fitted to undertake the coordination. Mistakes will be made, but no great undertaking is brought to a successful conclusion without mistakes having been made. The job should be gotten under way as soon as possible.

## GROUP MANAGEMENT FOR REFUGES

(From page 7)

U. S.-A in Forest County. State Game Land acreage fairly large.

Refuge Keeper John A. Hopkins.

Group No. 39. Comprises State Game Lands Nos. 39, 45, 47 and 96 in Venango County, and one block under contract for purchase. Territory large but acreage comparatively small and accessible.

Refuge Keeper Ralph H. Ewing.

Group No. 40. Comprises State Game Lands Nos. 24, 63, 72 and 74 in Forest and Clarion Counties, and Auxiliaries Nos. 1 and 96 in Clarion County. Territory large but accessible.

Refuge Keeper Edward Shaw.

State Game Lands No. 95 is not included in a group but can be handled by the District Game Protector.

DIVISION "G." Rollin Heffelfinger, Division Supervisor.

Group No. 41. Comprises State Game Lands Nos. 26, 79 and 105 in Bedford, Blair and Cambria Counties, one block under contract for purchase, and Auxiliaries Nos. 19, 97 and 12 in Cambria County. Territory large but State Game Land acreage comparatively small.

Refuge Keeper Herbert Diehl.

Group No. 42. Comprises State Game Lands No. 42, one block under contract for purchase, and Primary No. 5 on State Forest, in Westmoreland County, and Auxiliaries Nos. 47 and 67 on State Forest in Somerset and Cambria Counties.

Refuge Keeper William G. Matthews.

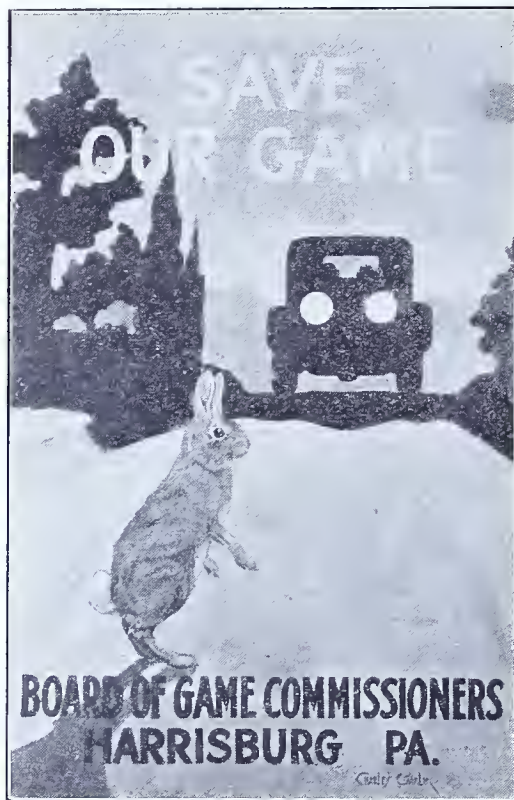
Group No. 43. Comprises State Game Lands Nos. 50, 82 and 111, and Auxiliary No. 89 on State Forest in Somerset County. Territory large but workable. No Refuge Keeper now employed.

Group No. 44. Comprises State Game Lands No. 51 in Fayette County. Additional lands should be acquired in that section.

Harold D. Carroll having recently been reclassified Land Acquisition Assistant, a Deputy has been temporarily placed in charge.

### Comments on the Group Management Plan

All but a very few land and refuge units will be under the care of refuge keepers, so district protectors will be relieved from direct responsibility for management, except for those few units. As there is no intention of employing additional refuge keep-



ers until men are available from the Game Commission Training School, it will be necessary for district protectors to continue giving assistance in the management of lands, with the aid of deputy game protectors where authorized.

In selecting the various land and refuge units to be included within each managerial group, consideration of necessity had to be given to the existence and location of Game Commission-owned refuge headquarters buildings, no two of which could be permitted within any one group. In several instances such buildings are none too advantageously located, but that can't be helped.

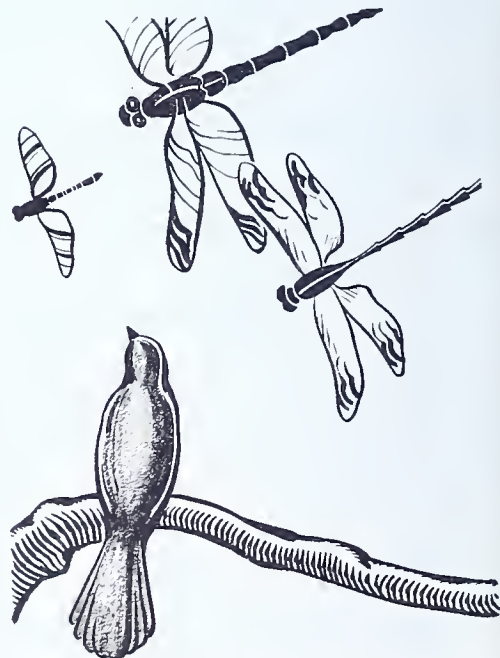
Also, in arranging the groups every effort was made to keep each group entirely within one supervisory division so that no one refuge keeper would be responsible to more than one supervisor. Since in a few instances the supervisory division line passes through a land or refuge unit, this line was slightly shifted to keep the unit wholly within one division.

The Board realizes that auto mileage for refuge keepers under group management will be somewhat larger than in the past. However, it is doubtful whether the increase will average more than 10%, or possibly 15%, above what it has been running during

the past few years. Many of the smaller units, and particularly the auxiliaries, may not require attention of refuge keepers more than once or twice a month. Other units will require more attention, depending on many and varied conditions and circumstances, such as the size of the units, the amount of work necessary to improve game conditions, whether or not infractions of the law are common, etc., etc. Good judgment will be required in the judicious use of automobiles in order to keep expense down to a minimum.

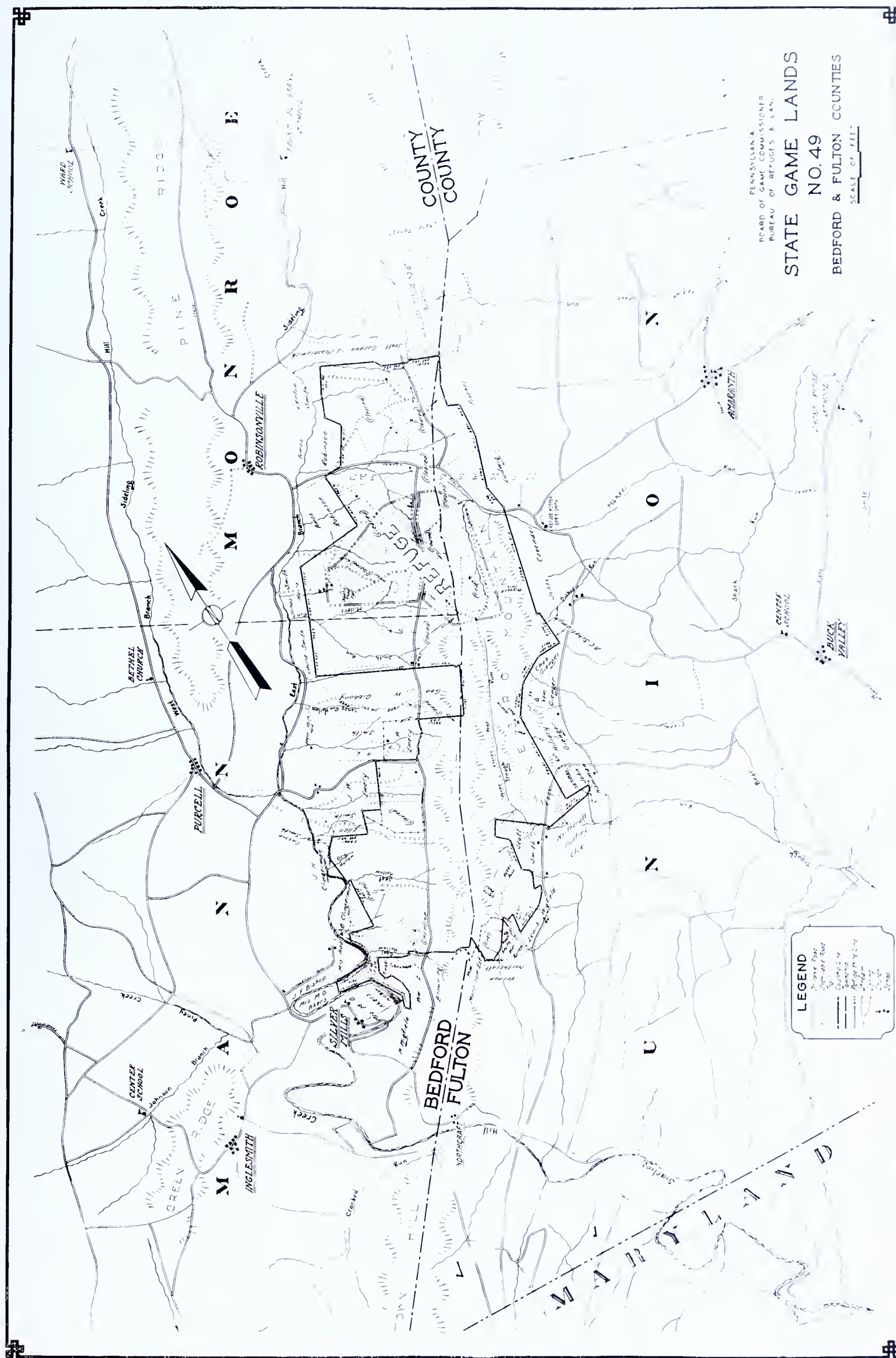
Attention is called to the fact that the principal duties of a refuge keeper are: to improve food and cover on every unit for which he is responsible so that it will become the best possible habitat for wildlife; preventing violations of game, fish and forest laws; controlling forest fires; and maintaining roads, trails, refuge lines and boundary lines of State Game Lands in good condition at all times. In other words, their primary duty is to care for the land and refuge units assigned to them. As much development work as possible must be done by refuge keepers in order to keep down expense through the employment of labor. As the situation is viewed, practically every minute of their time should be devoted to the lands under their care. They are, of course, expected to cooperate with District and Traveling Game Protectors in law enforcement and other work when and where their aid is needed, just as District and Traveling Protectors are expected to cooperate with them, but the exercise of good judgment is necessary to avoid imposition on either one or the other.

All concerned realize that successful management of State Game Lands and refuges is largely dependent on the ability of refuge keepers to get things done. Their work, especially with group management, must be conducted systematically and effectively if it is to be efficient. Energy, alertness, initiative, sound judgment, unselfish devotion to duty, honesty to one's self, and a genuine desire faithfully to serve the Commission and thus the sportsmen of the State are prerequisites to successful management. It is apparent to all that those who do not display the necessary energy, etc. cannot possibly be successful land managers.



PROTECT THE BIRDS







# Use a Flushing Bar!







THE COMMISSION  
TRAINING SCHOOL

• JULY, 1936 •

# POLICE GAMMEL NEWS



UNIFORM WORN BY  
STUDENT OFFICERS



# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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Permission to reprint will be granted providing proper credit is given.

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# • EDITORIAL •

VOLUME VII

JULY, 1936

NUMBER 4

## GIVE WILDLIFE A "BRAKE"

WITH the tourist season upon us, game has little or no chance on the highways unless motorists are considerate of the valuable creatures of our fields, forests and woodlands.

Most autoists try not to run down rabbits or other game, but sometimes they cannot avoid it. In some instances efforts to save wildlife have proven disastrous to the driver of the car or its occupants. A deplorable example of such a case occurred only recently on the Danville-Elysburg highway. A deer leaped into the pathway of the automobile and by swerving to avoid hitting the animal the car left the road, overturned, and killed two young men and seriously injured a girl companion. It pays to drive slowly and carefully on highways through big game territory. Obey the warning signs posted for this purpose by the Highway Department.

Small game, rabbits particularly, becomes very confused when temporarily blinded by bright headlights and often runs directly in front of a car despite the conscientious efforts of the driver to keep from hitting it. The Game Commission realizes the problems which confront the motorist and does not wish to be too severe in its criticism. Nevertheless it urges the wholehearted cooperation of the motoring public in an attempt to save as much wildlife as possible.

The value of wild creatures cannot be estimated in dollars and cents. Suffice it to say that it would bankrupt the Commission in less time than it takes to tell if it tried to replace, at average market prices of the live creatures, those which are killed on our highways each year. It would take several millions of dollars.

This appeal is directed not so much to the serious minded individual as it is to the careless and indifferent person who deliberately tries to see how close he can come to anything on the road, be it game or a fellow motorist. If motorists will not even respect the rights of each other what chance is there for our furred and feathered friends?

This year, more than ever before, they need all the protection we can give them. They are just recuperating from one of the most severe winters we ever had. Their numbers are sadly depleted in many sections, and unless the remaining stock is safeguarded from every possible menace, including the careless motorist, they will not reestablish themselves for several years.

Mr. Motorist, wildlife needs your help. Give it a "brake" and see that others do the same.

## THE 1936 SEASONS

The reduction in the number of shooting days, and in some cases bag limits, for the 1936 hunting season, as declared by the Board at its regular meeting on July 2d, it is believed will meet with the hearty approval of thinking sportsmen throughout the State.

The hunting season, which will begin at 9 A. M. November 6 and close at sunset on Thanksgiving Day, November 26, while curtailed somewhat over last year, is still very liberal.

The reduction in the bag limits likewise met with the approval of the vast majority of Pennsylvania's sportsmen, many of whom were of the opinion that this year seasons on certain species should have been closed, and bag limits still further reduced.

The two Safety Features decreed by the Board, including the delayed opening on the first day, and the recommendation that small game hunting parties be limited to five, is expected to bring about a much better relationship between landowners and hunters.

The delayed opening will give the farmers an opportunity to finish up their morning's work in time to join in the hunt, rural children may get to school without danger, and the limitation of small game hunting parties will eliminate the serious objection heretofore raised by landowners when large groups combed their fields repeatedly.

The new regulation limiting hunters to not have more than two

days' bag limit of small game in possession at one time is in the interest of conservation and fair play.

In fixing the 1936 hunting regulations the Game Commission endeavored to be fair to both the game supply and to those who enjoy the sport of hunting. If the new regulations do not work out next year, they can be changed to something better.

## PUSHING BACK THE FRONTIERS

Forty years ago the Pennsylvania Game Commission began pushing back the frontiers in wildlife restoration. The record to date is well known to conservationists everywhere.

Now July 1 marks another important milestone in Pennsylvania's forward progress, an innovation which it is sincerely believed will become another "trail blazer" in the movement.

On that date a dream of your came to fruition, and the first permanent training school for student officers was opened. The formal dedication took place on July 7.

Thirty-five eager young men are now hard at work fitting themselves to do a trained vocational job in wildlife administration and management, a job the needs of which in many ways are comparable to agriculture and forestry twenty-five years ago, in which fields trained extension workers nobly blazed the trails.

The selection of the first class of student officers was one of the most heartening experiences of the Game Commission and its staff. The 349 young men who took the examination were the finest group of prospective conservation workers ever assembled.

Proof of the smoothness and fairness with which the examinations were conducted was evidenced in many ways by the candidates themselves. We take pride in quoting from a letter from a college graduate who lost out on the last lap, the physical examination, as follows:

"These are just a few lines as a matter of record concerning the recent selection of applicants for the new school of the Game Commission. Although I was unfortunate at the last hurdle, and lost about fifteen pounds in thirty days due to my tonsils, still I want you to know that I certainly appreciate the splendid and straightforward method in which your selection took place. I, as one of the many applicants, admire heartily your whole present set-up, and the Commission is certainly to be congratulated on the extreme and unquestioned fairness of your methods of selection. And, although it nearly broke my heart to lose out at the last jump, still I have only respect and admiration for all of you men who treated us so courteously, and with so much fair consideration all the way through."

## ROADSIDE MENAGERIES

No proposal, humanitarian in purpose, has received more widespread endorsement than the Roadside Menagerie Act, sponsored by that great sportsman and conservationist, Governor George H. Earle.

For years the Governor was strenuously opposed to the uncontrolled displaying of wild creatures for commercial purposes, and one of his first moves during the current Special Session of the Legislature was to foster a measure which would curtail this activity and place the control thereof in the hands of the Commonwealth. A detailed account of the Governor's bill appears elsewhere in this issue, together with the rules and regulations under which these wayside exhibits must be operated.

The Board of Game Commissioners has been given the responsibility of adopting and enforcing such regulations, and it is up to every citizen in the State to cooperate by reporting any infringement of this new law to assure the proper care of the wild creatures displayed.





GOVERNOR GEORGE H. EARLE

The day of the inhumane, unsanitary, and often dangerous, roadside menagerie is past. No longer will gaunt, parasite-infested bears continue a hateful existence with that unending, futile pacing and straining at the end of a chain, or swelter in the scorching rays of the sun for lack of proper housing or adequate shade.

No longer will a host of other caged wild creatures suffer the pangs of hunger and thirst because of human neglect.

The craze for displaying captive animals for advertising purposes, which has been so much in vogue among roadside inn keepers during the past few years, has been curbed by none other than our own Governor, George H. Earle.

The Governor, first, last and always a humanitarian, sportsman, and conservationist, has for many years been unalterably opposed to the abuses so often associated with these so-called "attractions." One of his first acts under the Special Session of the Legislature was to sponsor a bill regulating this practice.

From the very moment the Bill was reported out it received hearty support from the S. P. C. A. and Federated Humane Societies and their affiliates, and these associations are deserving of much praise for their unceasing campaign in helping put it across. The Bill, signed by the Governor on June 18, and now known as Act No. 8, is as follows:

Section 1 Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by the authority of the same That this act shall be known and may be cited as the "Roadside Menagerie Act"

Section 2 As used in this act the following terms shall have the following meanings

"Board" The Board of Game Commissioners of this Commonwealth

"Person" A natural person copartnership association or corporation

"Roadside Menagerie" Any place where one or more wild animals are kept in captivity either in an enclosure or by tether upon any street or highway or upon land public or private adjoining any street or highway or upon land public or private in the vicinity of any commercial establishment for the evident purpose of exhibition or attracting trade The term shall not include the exhibition of any animal by any educational institution or in any zoological garden or in connection with any theatrical exhibition or circus

"Wild Animal" Any animal wild by nature as distinguished from the common domestic animals whether or not such animal was bred or reared in captivity

The singular shall include the plural and the masculine shall include the feminine and neuter

Section 3 The board may grant permits for roadside menageries Applications therefor shall be made on forms prepared and furnished by the board The applications shall show the name and address of the applicant the location or proposed location of the roadside menagerie the approximate number and kinds of wild animals being or to be kept space and method of housing and confinement measures taken to protect the public from injury by any wild animal and such further information as the board shall prescribe each original application shall be accompanied by a permit fee of five dollars (\$5.00) and each renewal of a permit shall be accompanied by a permit fee of two dollars (\$2.00) Separate applications shall be made for each roadside menagerie for which a permit is desired

Section 4 No permit shall be granted by the board until it is satisfied that the provisions for housing and caring for the wild animals and for protecting the public are proper and adequate and in accordance with the standards therefor established by the board

Section 5 All permits shall expire on the thirty-first day of May next after their date of issue and may be revoked by the board at any time prior thereto for failure to comply with the rules and regulations of the board adopted pursuant to the provisions of this act

Section 6 The board is charged with the enforcement of this act and shall adopt and enforce rules and regulations for the housing care treatment feeding and sanitation of wild animals kept in roadside menageries and for the protection of the public from injury by such wild animals

Section 7 All permit fees and fines received or collected under the provisions of this act shall be paid into the State Treasury through the Department of Revenue and shall be credited to the Game Fund

Section 8 From and after August fifteenth one thousand nine hundred thirty-six it shall be unlawful for any person to keep any wild animal in captivity upon any street or highway or upon land public or private adjoining any street or highway or upon land public or private in the vicinity of any commercial establishment for exhibition or the evident purpose of attracting trade or to have any wild animal in his custody or control for such purpose unless a permit therefor has been issued by the board

Section 9 Any person violating any of the provisions of this act shall upon summary conviction thereof be sentenced to pay a fine of twenty-five dollars and costs of prosecution and in default of the payment thereof to undergo imprisonment for not more than

ten days Each day during which a roadside menagerie is maintained without a permit shall constitute a separate offense

Section 10 This act shall become effective immediately upon its final enactment

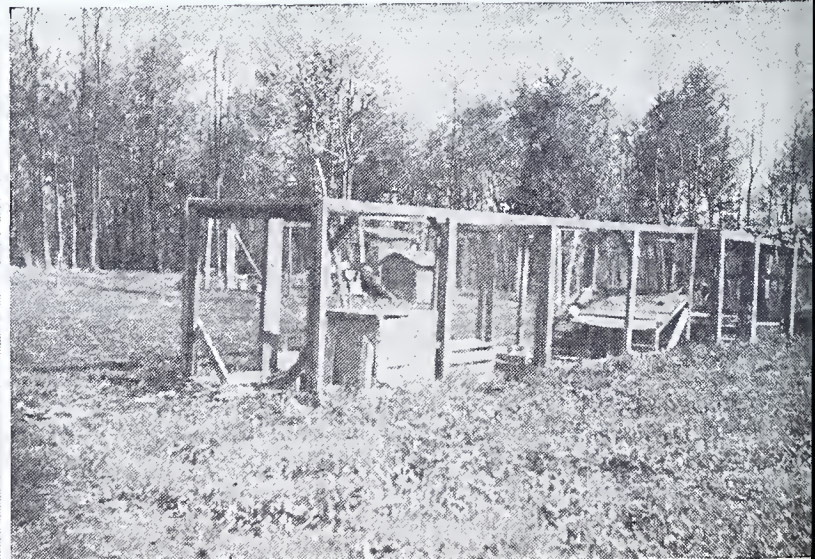
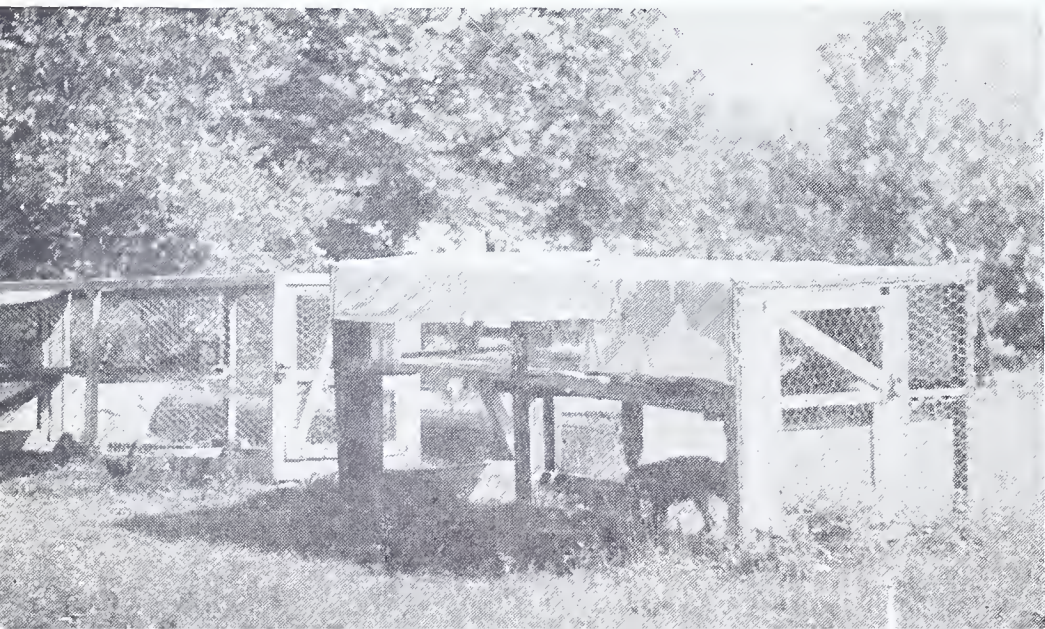
Under this measure, which is known as the Roadside Menagerie Act, it will be necessary for those desiring to display wild birds or animals to secure a permit for such purpose from the Board of Game Commissioners. Such permits shall cost \$5, and subsequent annual renewals thereof shall cost \$2. August 15th is the deadline. After that date every roadside menagerie must have a permit.

All such permits shall expire on the thirty-first day of May next following their date of issuance, and may be revoked by the Game Commission at any time prior thereto for failing to comply with the rules and regulations which the Commission has set up for this purpose, and which are as follows:

Pursuant to the provisions of the Act of June 18, 1936 (Act No. 8), the Board of Game Commissioners of the Commonwealth of Pennsylvania, under authority of the provisions of said act, this 22d day of June, 1936, by appropriate resolution made and agreed to, adopted the following rules and regulations applying to roadside menageries:

All wild animals (which includes all wild mammals, birds, reptiles, etc.) held in captivity at roadside menageries, as defined by the Act of June 18, 1936 (Act No. 8), shall be confined at all times in cages or enclosures of such strength and type of construction that it will be impossible for said animals to escape, and at no time shall animals be chained or otherwise tethered to stakes, posts, trees, buildings or other anchorage.

All such cages and enclosures shall be of sufficient size to give the animals so confined ample space for exercise and to avoid overcrowding, and shall be provided with such rain-proof dens, nest boxes, shelters and bedding as may be required for the comfort of the species of animals so held in captivity and to protect them against inclement weather or the hot rays of the sun.



Striking examples of poorly operated roadside menageries.



# BILL—ACT No. 8

Substantial guard rails not less than 36 inches high, well supported and fully enclosed with wire netting with meshes not larger than two inches or lattice work spaced not more than two inches apart from the ground to the bottom of the guard rail, shall be constructed around all cages or enclosures, on the side or sides where the public may approach them, at a distance of not less than four feet from the enclosure in which the animals are confined properly to safeguard the public from injury.

Regular feeding schedules shall be maintained. The rations supplied shall be adequate and varied, and so far as possible consistent with the food which is ordinarily eaten by such animals in a wild state, to maintain proper strength and healthy appearance.

Fresh water shall be kept in cages or enclosures at all times, and drinking fountains or other receptacles shall be kept clean and in a sanitary condition.

Proper signs shall be conspicuously posted on cages and enclosures requesting the public to refrain from feeding or annoying the animals so retained.

All animals so retained shall be handled in a humane manner and kept free as far as possible from parasites, sickness, or disease, and when afflicted or unsightly shall be removed from public display by the owner and given proper medical attention, or be destroyed in a humane manner.

All cages or other enclosures shall be cleaned daily, and said enclosures and their surroundings shall be kept in a sanitary and attractive condition, free from offensive odors.

Each enclosure or cage shall be labeled with the proper common name, in English, of the animal or animals therein confined for the information of the public. The letters on such labels shall be at least 1 inch in height.

## *Stock to Be Legally Obtained*

All animals retained at a roadside menagerie shall have been secured in a lawful manner. As evidence of such legal possession, the receipted invoice, bill of lading, or other satisfactory evidence shall be presented for inspection upon request by any officer whose duty it is to enforce the Roadside Menagerie Act above cited.

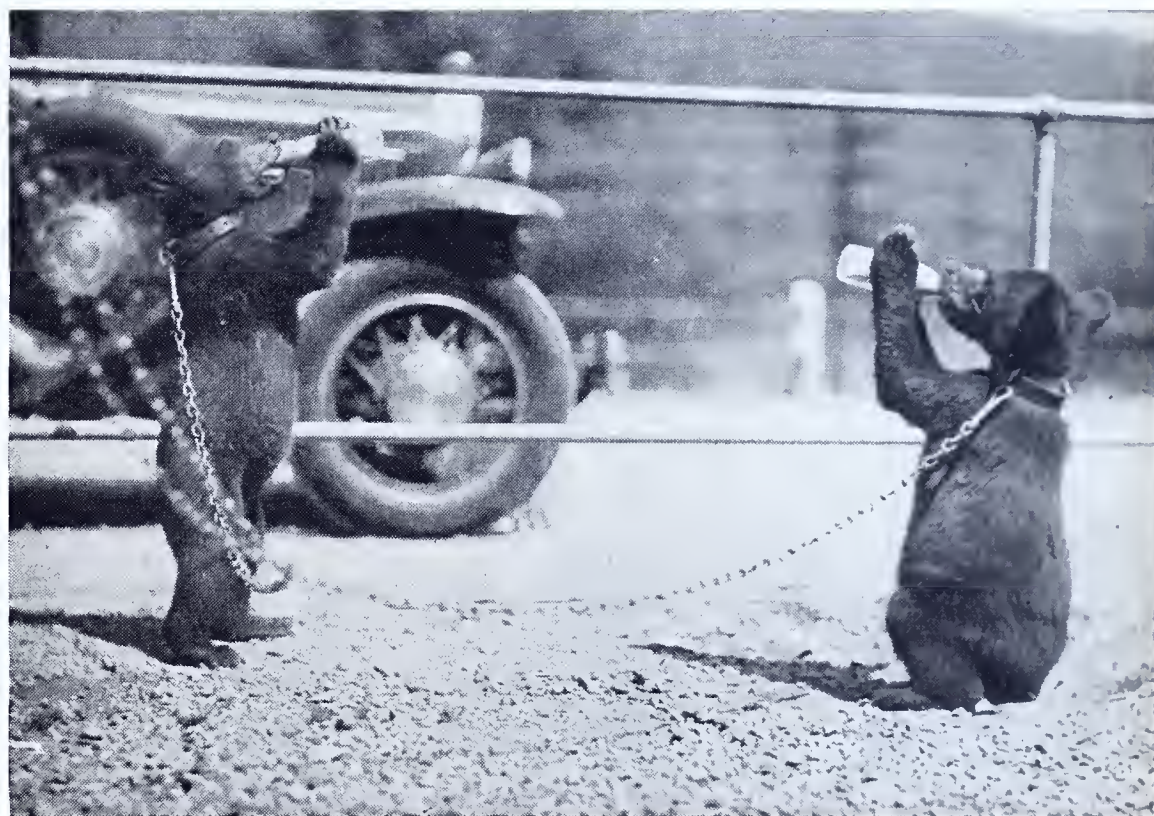
All permits issued under the provisions of the Act above cited shall be framed and publicly displayed at the roadside menagerie covered by said permits.

The penalty for operating a roadside menagerie contrary to the Act of June 18, 1936, or violating these rules and regulations, is \$25 and costs of prosecution, or imprisonment for a period of ten days.

No proposal, humanitarian in its trend, has received more wholehearted endorsement than the Roadside Menagerie Act, and the stand Pennsylvania has taken in this connection will no doubt induce other states to take similar action.



No longer will they continue a hateful existence, straining at the end of a chain.



How much more interesting and attractive would these cubs be if kept unchained in a well sheltered cage?

Broken bottles, old cans, and other refuse render this exhibit unsanitary and unsightly.





# Success Crowns Training School Program

**T**HIRTY-FIVE young men between the ages of twenty-one and thirty-eight years, stood at rigid attention before the American Flag at the Game Commission Training School at 2:30 P. M., July 7, and were formally inducted into service as student officers, by the Honorable Jesse Long, President Judge of Jefferson County. These were the successful competitors among three hundred and forty-nine persons who took the examinations at Harrisburg on June 20, and who have passed the rigid physical examinations required by the Board. They truly represent a fine selection of mentality and physical fitness.

The flag was lowered to half mast and with bowed heads all paid silent tribute to their fellow employees who died during the year. "Taps" were sounded, leaving a vivid impression upon everyone present.

Following this ceremony, the student group assembled in the Instruction room and listened attentively to brief addresses by Honorable Seth Gordon, Executive Secretary of the Commission, W. C. Shaffer, Director of the Bureau of Protection, Superintendent Cramer and Assistant Superintendent Reed, as well as a stirring address by Judge Long. Other officers who were present were introduced to the student class.

It was a happy day for the members of the class who have worked so hard and diligently to attain membership in the Training School. The sportsmen of Pennsylvania can look forward to a group of highly trained, courteous and efficient officers to represent their interests in the field service.

Our very best wishes go forward to these young men who have chosen wildlife administration and management as their life's vocation.

The selection of the above officers "was the most heartening experience of my quarter of a century of wildlife work," said Secretary Seth Gordon, who holds that the Training School Program will be another "trail blazer" in the field of conservation.

When it originally became known that the Commission intended establishing a permanent school for field officers, exactly 2,255 inquiries were received from interested individuals. Later, 948 applications were filed. This number, through various processes of elimination to secure the best men available, was gradually reduced so that when time came for the examination, held in Harrisburg on June 20th, only 434 were invited to participate. Of this number but 349 reported and took the examination.

From this group the 35 with the highest rating were selected, subject to rigid physical examination by the Board's competent physicians. This physical examination eliminated 15 of the original group, making it necessary to draw upon a similar number of alternates from each of the seven divisions until the quota was filled.

The individual making the highest rating in the examination was John B. Miller, Coudersport, Potter County, who



Officers and guests who attended the opening of the new Training School. First row center, left to right: Wilbur M. Cramer, Superintendent of the School (in uniform); W. C. Shaffer, Director, Bureau of Protection; Judge Jesse Long, President Judge of Jefferson County, who administered oaths of office; Seth Gordon, Executive Secretary; Robert Reed, Assistant Superintendent of School (in uniform). Other guests included former Board member Richard Reitz, Division Supervisor, Maurice Sherman; Game Protector, Arthur Logue; Game Refuge Keeper, Earl E. Smith and daughter; Mrs. Wilbur Cramer and daughter and Mrs. Robert Reed and daughter.

qualified with 345½ points out of a possible 400.

Of the 35 men finally selected 10 were college graduates, 13 were high school graduates, 1 was a graduate of business college, 3 were graduates of preparatory schools, 1 was a graduate of a conservation school, 3 were college non-graduates, and only 4 were common school graduates.

The average age of those competing was 25 years, and of the 35 final selections 25 were single and 10 were married.

While the date has not been set definitely, efforts are being made to open the School on the 6th of July, with dedication ceremonies taking place at the School headquarters in Jefferson County, to which prominent State Officials, sportsmen, newspaper men, and others have been invited.

The School will be in effect practically the whole year, with a certain percentage of the time being spent in the class room and the remainder in the field learning the practical problems of the work.

Pennsylvania game authorities point out that the venture is receiving nationwide commendation, being the first permanent Training School for wildlife field workers ever established in the United States.

The names and addresses of the officers who were selected and who will begin training on July 7th are as follows:

## DIVISION "A"

Shuler, John S., 117 Center St., Millersburg, Dauphin.  
Moyer, Wm. A., 1 E. Main St., Macungie, Lehigh.  
Benner, Wm. W., 135 W. Wyneva St., Phila., Philadelphia.  
Parlaman, Roht. D., 242 Pear St., Reading, Berks.  
Bachman, Albert R., 110 Main St., Hellertown, Northampton.

## DIVISION "B"

Checklinski, Jos. S., 1 Orchard St., Glen Lyon, Luzerne.  
Smith, George B., Alderson, Luzerne.

Orr, Richard W., R. D. 2, Box 37, Shickshinny, Luzerne.  
Stump, Wm. K., 725 E. Broad St., Tamaqua, Schuylkill.  
Kennedy, John G., 501 S. Irving St., Scranton, Lackawanna.

## DIVISION "C"

Flexer, Edwin W., 1543 Memorial Ave., Williamsport, Lycoming.  
Dieffenderfer, Geo. A., 205 Green St., Mifflinburg, Union.  
Bryant, Harold W., R. D. 1, Tioga, Tioga.  
Catherman, Bruce W., Swengel, Union.  
Locey, Frederic V., R. D. 1, Mansfield, Tioga.

## DIVISION "D"

Heckman, Paul S., 350 W. King St., Chambersburg, Franklin.  
Osman, James A., 145 E. Main St., Mechanicsburg, Cumberland.  
Morningsstar, Ray H., R. D. 2, Huntingdon, Huntingdon.  
Ruha, Nicholas M., 503 E. Water St., Mt. Union, Huntingdon.  
Lichtenherger, Robt. S., 410 Enola Dr., S. Enola, Cumberland.

## DIVISION "E"

Miller, John B., 608 N. Main St., Coudersport, Potter.  
Sprinkle, Geo. D., 802 Worth St., Reynoldsville, Jefferson.  
Kelsey, Claude B., Porter, Jefferson.  
Lettie, Dunne E., Porter, Jefferson.  
Kistner, Jos. W., 2d St., Roulette, Potter.

## DIVISION "F"

Latham, Roger M., R. D. 1, Espyville, Crawford.  
Keck, C. Fred, 115 Fifth Ave., W. Warren, Warren.  
Flaugh, Ralph E., Erie St., Saegerstown, Crawford.  
Titus, David R., Box 664, Sheffield, Warren.  
Cook, Rea E., R. D. 1, Shippensburg, Clarion.

## DIVISION "G"

Leindecker, Jos. A., 450 Lincoln Ave., Bellevue, Allegheny.  
Lemmon, Paul A., R. D. 1, Marion Center, Indiana.  
McGregor, Jeff. B., 120 E. Hallam St., Wash., Washington.  
Wargo, Albert A., 909 Park St., McKeesport, Allegheny.  
Zemyan, Stephen J., Route 1, Box 24, Patton, Cambria.

Opposite are the successful candidates with the exception of one—Clyde E. Lambach, of Sunbury, who replaced Frederic Locey, of Mansfield, when the latter, for personal reasons was forced to resign.

There are five men in each division. The top line starts with Division "A," the second is Division "B," and so on down the page to the seventh line or Division "G."





John S. Shuler  
Millersburg



William A. Moyer  
Macugie



William W. Banner  
Philadelphia



Robert D. Parlaman  
Reading



Albert R. Bachman  
Hellerstown



Joseph S. Checklinski  
Glen Lyon



George B. Smith  
Alderson



William K. Stump  
Tamaqua



Richard W. Orr  
Shickshinny



Joseph G. Kennedy  
Scranton



Earl W. Flexer  
Williamsport



George A. Dieffenderfer  
Mifflinburg



Harold W. Bryant  
Tioga



Bruce W. Catherman  
Swengel



Fredric V. Lucey  
Mansfield



Paul S. Heckman  
Chambersburg



James A. Osman  
Mechanicsburg



Raymond H. Morningstar  
Huntingdon



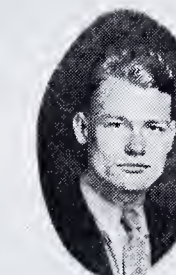
Nicholas M. Ruha  
Mt. Union



Robert S. Lichtenberger  
South Etna



John B. Miller  
Coudersport



George E. Sprankie  
Reynoldsville



Claude B. Kelsey  
Porter



Duane E. Lettie  
Porter



Joseph W. Kistner  
Roulette



Roger M. Latham  
Espyville



Fred G. Keck  
Warren



Ralph E. Flaugh  
Sagerstown



David R. Titus  
Sheffield



Rea E. Cook  
Shippensburg



Joseph A. Landecker  
Bellevue



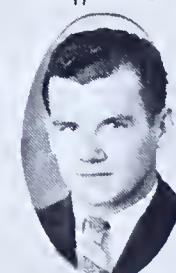
Paul A. Lemmon  
Marion Center



Jefferson B. McGregor  
Washington



Albert A. Wargo  
McKeesport



Stephen J. Zemyan  
Patton



# Bores and Chokes of the American Shot Gun

By W. D. Perry

AMONG the adults throughout the entire nation, there are more people who indulge in hunting than any other sport; this includes the great American pastime, baseball. This is the natural stepping stone for another statement: The American shot gun is perhaps the best loved sporting implement in our country. It is the one article that every hunter cherishes and attends with infinite care. It is the weapon which every boy hopes some time to own.

No one will deny that the gunmaker's art has culminated in a thing of beauty which seems more than inanimate—it seems to have a soul. If it cannot have memories, it certainly has associations which reflect fond recollections through the mind of its owner—and seldom can he pass where it is resting without touching its shining stock or taking a look through its gleaming barrel.

As a result of its evolution we have today four popular types. The latest creation is the over-and-under gun—that is, a double barreled gun mounted vertically, or one barrel over the other, giving it the advantage of the double gun with the further advantage of sighting over a single barrel rather than between two barrels. Another very popular type is known as the pump or repeating shot-gun, which holds six shells in a magazine—a very practical and business-like weapon with a host of followers.

Then we have the auto loading gun, commonly known as the automatic, which also holds six shells in a magazine and whose mechanism is operated by the recoil of the exploded shell. This is a great favorite among duck hunters and is a very deadly weapon. Several years ago, the State of Pennsylvania made it unlawful to use it by a special act of the Legislature. The fourth is that aristocrat of the field, the double gun, so familiar to all gun lovers. Not only does it have two barrels, each with a different choke, but it possesses lines of beauty not found in other types, and no other style can match it for balance.

No man can tell all about the shot gun in fifteen minutes, so I have elected to say something about bores and chokes—terms familiar to all hunters—but understood by only a few.

The bore or gauge of a gun is a term that merely defines the size or inside diameter of the barrel. The three popular sizes are the 12 Ga., the 16 Ga. and the 20 Ga. The basis for this determination may be traced to Colonial days when all firearms were more or less hand made weapons. In those days the size of any gun, rifle or shot gun was determined by the number of round balls which would fit the bore that could be cast from one pound of lead. Hence, a 12 Ga. gun is of such a diameter that a round lead ball which fits its bore would

weigh 1/12 of one pound—in other words, one pound of lead would cast twelve round balls of equal size, each of which would fit.

The 16 Ga. requires 16 such balls cast from one pound of lead to fit its bore and the 20 Ga. would require 20. The .410 caliber, a more recent creation, is determined by decimals of an inch as these digits imply. I have seen the old-time gunsmith's gauge which dates back to muzzle loading days. It consisted of a number of tapered steel leaves which were marked and numbered and riveted together at one end. By inserting one of these leaves in the muzzle, he could determine the size of any gun from the ponderous 4 Ga. goose gun of that period to the smallest squirrel rifle which required over 300 of these lead balls to fit its bore.

But the modern gun factories have found out long ago that they could not depend on this haphazard method. They found that the breech loader with its separate loaded shells had to be precision made. The size had to be uniform to the thousandth of an inch, so the leading companies and the gun factories finally evolved the present standard of gauges or sizes which may differ slightly from those old standards, but still retain the time honored terms of 10-12-16-20 and 28 Ga.

Many, long and heated have been the



A man, his dog, and his gun.



arguments as to the merits of the various shot gun sizes. I cannot hope to settle this much disputed question, but I can, in an unbiased way, discuss it according to rules of proven and accepted ballistics.

Before we can start this discussion, it is necessary to say something about another very important, if not vital element, the choke. Choke is a term applied to the muzzle constriction which regulates the shot spread or pattern of the charge. There are three primary degrees of constriction or choke known as full choke, modified choke and cylinder bore. These are determined by a standard test of shooting at a 30" diameter circle at a distance of 40 yards.

A full choke, regardless of the gauge or size of shot used, will place from 70 to 75% of all the pellets in the charge within this circle. The modified choke will place from 60 to 65%, and the cylinder bore will place from 45 to 50%. There are a number of deviations from these primary constrictions. One is a recent creation known as the long range or wild fowl choke, designed to give the very minimum of shot spread. Some companies claim an 80% pattern and better.

Another very popular modification is known as the improved modified choke or 67½% pattern—still another and equally popular constriction is called the improved cylinder bore or 55% pattern. The latest creation, the skeet choke, is designed to give the maximum of shot spread together with extreme uniformity of pattern. The excellence of any of these chokes and their modifications is reckoned on the evenness of shot distribution. The trap shooter examines the pattern of his gun to see whether or not there are any "holes" or bare spaces large enough to miss a clay target. If he finds that the pattern is evenly distributed, with no splotches or holes, he is highly pleased, and the value of his gun immediately rises at least 50% if not to the dizzy heights where money is no consideration.

It has been proven and the table of ballistics shows that shot guns of all gauges have about the same ballistics when using "relative" loads and the same shot size—we mean by this that the velocities or speeds of their shot charges are near equal. Speed plus pellet weight determines distance and energy. Now if the various sizes of shot guns have the same speed and are using the same size of shot, the efficiency of the individual pellet would be the same, the only essential difference being the larger bores shot a greater number of pellets.

Using the 12 Ga. as a standard basis for comparison, its standard shot charge is 1 1/8 ozs., for convenience, let us say 400 pellets. Both in trap shooting and duck hunting it has been found necessary to use the 12 Ga. full choke in order to secure a pattern that is dense enough to bring down those high-flying, swift moving birds and to smash the illusive clay target. The 12 Ga. full choke with its 75% pattern will place 300 pellets in the 30" circle at 40 yards.

The 16 Ga. has only one oz. of shot—and while a full choke will place 75%

of its pellets in the same circle at the same distance, there are 12½% fewer pellets. Instead of 300, we have only about 260, a much thinner pattern. Now if it is necessary to have a pattern of 300 pellets for this kind of work, and since it is possible to further constrict the choke of the 16 Ga. in order to get a more dense pattern, it naturally follows that the 16 Ga. falls short of these requirements and is considered inadequate. The 20 Ga. with its charge of only 7/8 oz. shot is obviously worse. This should explain the scarcity of the smaller bores at the traps and in the blinds.

We will look at it from another angle. It is generally concluded that around 60 yards is considered the maximum distance at which ducks may be killed with consistency, using the standard field loads, this, of course, with a 12 Ga. full choke gun. This combination produces a pattern of sufficient density to perform this work. Now in order for a 16 Ga. to give the same density the distance must be reduced 12½%, since it shoots 12½% less shot. It will be readily seen that its maximum distance on ducks is 52



yards instead of 60 as with the 12 Ga. If a 20 Ga. is used, the distance would have to be reduced another 12½%, or 44 yds. instead of 60. In some sections there has been a recent swing toward the 10 Ga. for duck shooting. One factory is putting out a custom-built job in a 10 Ga. magnum or extra long range gun. Most all gun manufacturers have a special line of heavy 12's designed especially to handle the super shot charges and choked for extremely long range work. They claim a killing range of 75 yards. The smaller bore is hopelessly inadequate for this kind of shooting.

But when we get in the field, conditions are somewhat altered. The 12 Ga. full choke has been found to be too dense in pattern for the average upland shot. The hunter does one of two things, he either misses outright or so mutilates the game as to render it unfit for use. With the 12 Ga. it is necessary to open up the choke to an improved cylinder or a 55% pattern in order to kill cleanly and at the same time not to spoil the game. Using the same shot charge as we have used in previous comparisons, the 30" circle would contain 220 pellets. If we use a 16 Ga. in a modified choke, we get 216 pellets in the same target, which is about the same density of pattern as

the 12 Ga. with improved cylinder bore, and is therefore just as efficient. If we use the 20 Ga. with a full choke Barrel we also get the same density of pattern and it, too, is just as efficient as the 12.

While it is possible to get equal results with the three sizes of guns by choke regulation, there is another element that is much in evidence, the maximum shot spread. The 12 Ga. with its 55% pattern would have an extreme spread at 40 yards of 54", which gives the hunter ample latitude to compensate for errors in holding. The 16 Ga. with modified Choke has a maximum spread of 12½% less or 47", giving the hunter less leeway. The 20 Ga. full choke is reduced another 12½% or a maximum spread of 40". While on the subject of shot spread, I might explain that the smaller the bore, the greater the percentage of pellets exposed to the barrel walls. When the shot column is driven through the barrel, these pellets which are exposed to the walls are distorted and flattened by this friction and are prone to fly at a tangent from the line of the bore's axis. By reason of this distortion, that portion of pellets which strike the target outside the 30" circle are not as regularly spaced as those within the circle. This explains why the outer extremities of the smaller bores' patterns are not as uniform as the larger bore's.

Altogether, it may be summed up in this statement, that in the field the hunter can get equal results but must hold closer with the smaller bores. The good shot may kill as much game with the 16 and 20 as he would with the 12 because of the lightness of the arm and his ability to handle it quicker. The poor shot will do well to select a 12 Ga.—He is certain to need that larger shot spread when a ruffed grouse arises in a clap of thunder and vanishes like a phantom shadow, or a cotton-tail flicks hither and yon in and around the briar thickets and bushes.

Cold figures would make it appear that the 12 Ga. is the best all round size for the average hunter. The 16 and 20 certainly cannot outperform the 12 in any form of shooting. The 12 Ga. has a decided advantage in a number of kinds of shooting as we have shown. On the other hand, many good sportsmen are willing to take a handicap in order to rid themselves of the burden of carrying the extra weight. Certainly, there is a justified pride in ownership of the smaller bore, as they seem to possess certain qualities of beauty and balance that is lacking in the bigger guns.

During the past three years the sportsmen of Western Pennsylvania seem to be thinking along these lines. A checkup of dealers' records reveals that the 16 Ga. has made a sharp increase in sales and one large dealer of this City reports that last year the 16 Ga. actually outsold the invincible 12.

When you buy your next gun, no matter what style or gauge you select, choose a good one—one with lines of beauty, one with balance and one that fits you; treat it right and make it your companion

(Continued on page 23)





Young Bald Eagle. Only three pairs are known to nest in Pennsylvania at this time.

# Pennsylvania and the Hawk Problem

*Is It Backward or Progressive?*

*By Richard Pough*

rado, Louisiana, Mississippi, South Carolina, Texas, and Wyoming; while Utah exempts the Prairie Falcon and protects the Duck Hawk.

We find two states going still further: Illinois, in addition to not protecting the Duck Hawk, also exempts the Pigeon Hawk, and Oregon the Prairie Falcon as well as the Duck Hawk. The State of Washington protects none of the three.

The next category only numbers one state. For some quite unknown reason, the State of Nebraska feels that it is necessary to exempt the Red-shouldered and the Sparrow Hawk from protection, in addition to those we have just discussed.

New York State, while starting out with a law not protecting any hawks, but subsequently finding proof of their beneficial habits, now protects the Red-shouldered, Broad-winged and Rough-legged Hawks. Strange as it may seem, in view of the fact that many states specify the Duck Hawk as being exempt from protection, New York State protects it. Reduced to a few pair for the whole state, this relative of the famous European Peregrine Falcon of the medieval falconers, is one of the most interesting of all our native birds to the ornithologist of all our native birds to the ornithologist, and is in danger of extinction.

Finally we come to Pennsylvania, whose laws on the subject of hawks are rather unique in that they exempt from protection certain highly beneficial species, not simply by including them in the general category of hawks, but by

specifically naming them as being exempt from protection. In the case of the Broad-winged Hawk, for instance, which has been unquestionably shown to be 100% beneficial, this is hard to understand. Pennsylvania specifically names and lists on their hunting licenses, in such a way as to actually encourage their destruction, the following that might be called harmful: Goshawk, Sharp-shinned Hawk, Cooper's Hawk, and the following that can be considered only completely beneficial: the Broad-winged Hawk, Red Shouldered Hawk, and the Rough-legged Hawk, and the following that are generally considered to be far more useful than harmful: the Red-tailed Hawk, the Marsh Hawk, and then finally the two beautiful falcons that are today becoming so rare as to be curiosities, the Duck Hawk and the Pigeon Hawk.

Pennsylvania, lying as it does, on the great migratory highway of thousands of hawks, is in a particularly strategic position with regards to the future of these birds. Carefully protected by law in the states where they nest and to whom they may be more properly termed to belong, these birds that pass only a few days at most in Pennsylvania are killed by the thousands, while in contrast the states where they normally reside over the greater part of the year carefully protect them.

No better example of the conditions which brought about the Federal Migratory Bird Treaty, which took the responsibility for the protection of most birds out

*(Continued on page 23)*

**T**HE legal status of the birds of prey varies all the way from those states which do not protect hawks to those which are, on the basis of modern research, protecting by law all but the Cooper's, Sharp-shinned, and Goshawk; in other words, all but the bird killing hawks which do at times become somewhat troublesome, especially if present in great numbers. Lying intermediate between these two are certain states which exempt one or more additional species from protection. These states are not open to the same criticism as those which protect none. The very fact that they specify certain birds implies an attempt to study the problem and cope with it intelligently.

To summarize, the following states simply do not protect any hawks: Alabama, Arizona, Arkansas, Connecticut, Delaware, Georgia, Idaho, Maine, Maryland, Michigan, Minnesota, Montana, Nevada, New Hampshire, Oklahoma, Rhode Island, Vermont, Virginia, West Virginia and New Mexico.

The following states afford ideal protection for all birds of prey, except the Goshawk, Cooper's and Sharp-shinned hawks: Florida, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Missouri, New Jersey, North Carolina, North Dakota, Ohio, South Dakota, Tennessee, and Wisconsin.

The following states, in addition to exempting the above, also do not give protection to the Duck Hawk because he kills birds. The Duck Hawk would no doubt be a serious menace if found in great numbers, but the bird's present scarcity warrants its protection, even though it kills a few larger non-game birds. The States are: California, Colo-

Thousands of hawks of all species were slaughtered along "Hawk" Mountain, Schuylkill County. The mountain has since been purchased by naturalists to stop the wanton killing.





# The 4-H In Conservation

**T**HERE is pointed out in the May issue of the GAME NEWS under that most constructive article by James N. Morton, entitled "A Game Restoration Job For Everyone," many simple ways in which the people of Pennsylvania can help improve wildlife conditions. So practical were the suggestions he made, and so universally applicable, that his article received nation-wide comment.

Without attempting to steal his thunder in any way, I would like also to point out very briefly how the plan he outlines could be extended under the administration of State-wide organizations. There are several major organizations within the Commonwealth adequately equipped from the standpoint of personnel and initiative to conduct a game restoration program, but among these I know of none which have any better advantages, any more time, or any more enthusiasm than the 4-H clubs of Pennsylvania.

The Board of Game Commissioners is now working up a suggested conservation program for these young men and women which they will be asked to adopt, but until such a plan is completed it is essential that as much ground work be laid as possible. Here sportsmen associations, state granges, and other interested groups or individuals can materially assist. Contacts can be made, and even some local projects carried out. In this way interest will grow so that by the time the Commission's program is ready for presentation, the 4-H members will have a pretty good idea of the part they will be expected to play.

A 4-H conservation program should be planned on a twelve month basis with particular stress laid on certain phases, consistent with their timeliness. For instance, right now a campaign sponsored by the 4-H members among farmers, to get them to use flushing bars while mowing, would have tremendous State-wide effect and ultimately would save thousands of valuable game birds. 4-H clubs could also be schooled in the artificial propagation of game birds and animals.

Thus, with proper equipment, many clubs would be in a position to rear day-old chicks furnished by the State game farms, to incubate any eggs which might be left over, and to hold a limited number of adult birds until the proper time for their release. These problems are always confronting the Commission, although the cooperation of interested sportsmen's clubs has enabled the department to handle the excess to the best practical degree.

Planting of food and cover for wildlife would also constitute a large project for club members. Local game census could be taken. Bird house building contests could be sponsored and small sanctuaries both for song birds and wild waterfowl, could be established locally.

Shrubs and vines could be planted to retard erosion and to fill up corners and other waste places in fields; wood lots and thickets could be protected from

grazing; club members could make a detailed study of the wildlife of their community in relation to its food and cover (the latter project would prove invaluable to game officials). These and many other worthwhile projects could be carried on by 4-H clubs under the supervision of some competent local game administrator, and prizes or other awards could be provided for the groups or individuals making the best showing throughout the year.

The adoption of a conservation program would enable the members of the 4-H club groups to enjoy many worthwhile opportunities in the field, and at the same time would give them a keener perception of the relationship between wildlife and the fields, woods and forests in which it lives.

Our farmers and landowners do not yet fully recognize the true economic value of many of our wild creatures, and the 4-H boys and girls should be able to bring this message home to them more forcibly than any other agency or individual.

We cannot afford to overlook the potential value of such a state-wide group, and the Game Commission believes that the sportsmen will be in full accord with any program that will interest the farmer youth in the problems of wildlife restoration.



—Photo, Phila. Inquirer  
Erecting winter feeding boxes for birds.

We must not forget for a moment that we are living in a fast moving age; that the automobile and good roads have made it possible for us to reach the remote sections of our wild forests within a comparatively short time; that we are demanding more and more in the way of outdoor recreation; that our hunting public is increasing year after year; that the automobile, the reaper, the mower and other juggernauts of destruction are annually killing millions of dollars worth of valuable wildlife—that all these things are combining to eventually rob us of a wonderful heritage unless we call upon every reserve we know of to quell them.

In other words, the time is ripe now to call upon our farm youth to assist us in every way possible—to conserve our soil, to beautify the landscape, to know and love our birds and mammals, our trees and flowers, and their connection with agriculture. If this is done, whether by the Game Commission or by the Federation of Sportsmen or local groups—it does not make any difference which—it will not be long ere Pennsylvania will increase the value of her wild creatures and her recreational facilities a hundred-fold.

If you are interested in such a program, let us hear from you. We will welcome your suggestions for working it out.

—The Editor.



# Breeding Refuges for Wild Turkeys

*Success marked the establishment of these small breeding areas—so much so, in fact, that many more will be added.*

*By Leo A. Luttringer, Jr.*

**S**MALL fenced areas of a few acres, if placed within wild turkey refuges, not only furnish excellent breeding and nesting places for these popular game birds, but provide the natural environment so necessary in keeping the turkeys, especially those reared at the Game Farms, as wild as possible.

When farm-reared turkeys were first stocked several years ago, the change in environment was so drastic that they did not become acclimated readily and in many instances wandered to nearby farm lands where they became an asset or a liability, depending upon how the land-owners felt about it.

Birds released for stocking purposes likewise had difficulty in outliving their

accompanying picture testifies, but the other flushed when we came within ten feet. The reason, we discovered later, was because some creature, probably a turtle, was robbing the nest. Originally it held 17 eggs, but only 8 remained. Broken shells were found within a radius of 50 feet from the nest.

In addition to the two brooding birds we saw three with peeps, all outside the refuge. These, to all appearances, were native stock. The manner in which the hens guided the young chicks to safety and seclusion was interesting as well as amusing. In one instance our approach scattered the brood, but the old hen stood by her guns and gradually rounded them up. She was badly frightened, but

slipped furtively through some tall undergrowth along the mountainside.

This hen had ten in her brood; another had only five; and the last we saw was too far away for us to determine just how many chicks were with her.

The keeper in charge of the refuge in question was enthusiastic in his praise of the experiment and is of the opinion that it has solved the problem of getting hand-reared birds to acclimate themselves to a wild environment. This particular refuge keeper has lived in turkey country all his life and knows what he is talking about.

Other refuge keepers who are supervising such experiments have likewise endorsed the program highly and an expansion of it will undoubtedly be carried out. If it continues successful there is no doubt whatever that wild turkey hunting will again assume its rightful importance in the Commonwealth.

Planting of natural foods, supplemented by extensive artificial feeding in severe winter, are also important factors to be considered and the Commission has already taken steps to carry out such a plan.

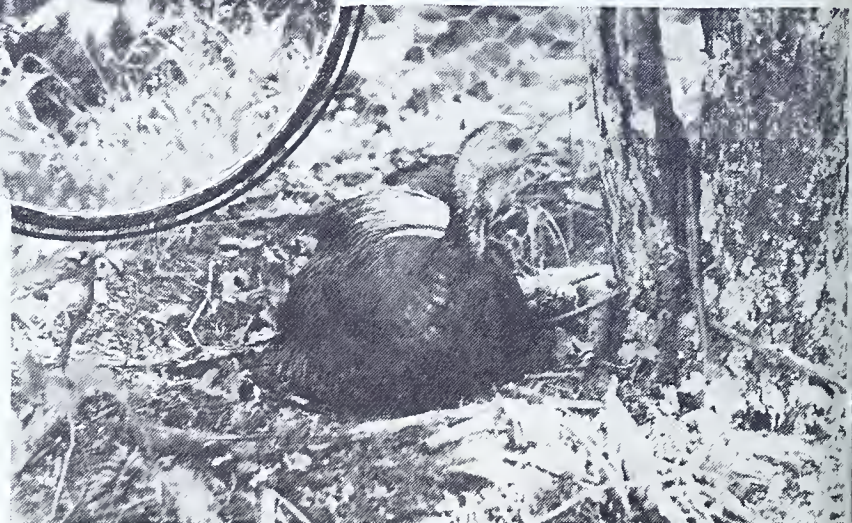


Left: Hen and poults on road near refuge house.



Hen on nest within fenced area. Note wire at rear.

The last we saw of her was a glint of sunlight on her back.



domestic tendencies, and as a result were easy prey for many hunters.

To offset these conditions small fenced-in areas were established on several wild turkey refuges as an experiment. A number of hens from the game farm were placed within these enclosures and wild gobblers mated with them, resulting in stock which is considerably wilder than the hand reared birds. All of these have proved successful far beyond the Board's expectations, and more will be set aside on other refuges as time and money permits.

The writer recently visited one of these experiments. Here many of the turkeys were nesting and photographs were taken of two hens, one with a setting of nineteen eggs and another with eight. One permitted very close approach as the

her maternal instinct overcame her fear so completely that we retreated promptly and left her at peace with the world. The last we saw of her was a glint of sunlight on her bronzed back as she

This whole program is being supervised by Wm. G. Fluke, member of the Commission from Saxton, who has been interested in the wild turkey for many years.



# The Lonerган Pollution Bill

IN the April 1936 issue of the PENNSYLVANIA GAME NEWS we carried an article on the proposed Federal control of stream pollution (Lonerган Bill S-3958) as outlined by Grover C. Ladner, Deputy Attorney General, who collaborated in the preparation of it.

This Bill which was reported out favorably by the Senate Committee of Commerce has been watched very carefully by Pennsylvania sportsmen, and while it is on the calendar of the present Congress, it is doubtful whether it will have a chance of going through before this session adjourns.

If it does not go through, at least it will have gained sufficient supporters to facilitate a rapid passage during the next session. The Bill, in its entirety, is quoted below for your information. Highlights of the bill are as follows:

a District Board to be selected from the bona fide residents of the district. Where compact agencies or boards exist, such compact agency may be designated the District Board of that area.

The bill makes it the duty of these District Boards to prevent the pollution of waters within the district by voluntary methods, if practical, to recommend to the National Committee loans or grants for the construction of sewage disposal plants and trade waste treatment works within their district, and, if voluntary means fail, to institute proceedings for prevention and abatement of water pollution.

A most important feature of the act is Section 8, under which the National Committee, under recommendation of the District Board, may make loans or grants, or both, to states or subdivisions or municipalities thereof, or to make loans to corporations or persons for the construction, enlargement or improvement of sewage disposal plants and trade waste treatment works.

The bill further declares the pollution of the navigable waters of the nation as therein defined, and in violation of the regulations promulgated by the committee, to be a public and common nuisance, and authorizes an action to abate the same to be brought by the United States Attorney in the United States District Court, upon request of the National Committee or District Board.

Under this bill, the growing evil of stream pollution in the navigable waters of the nation is attacked uniformly throughout the country. All of the knowl-

the time the Lonerган Bill is law, the State Constitution can be amended so as to enable municipalities of the State to take full advantage of the loan and grant provision of the Lonerган Bill.

Senator Lonerган, who introduced the bill, and Senator Guffey, who was a member of the subcommittee, conducting the hearings, are entitled to great credit and the thanks of the decent citizens toward advancing this constructive measure.

From the very time this bill was introduced certain forms of organized industry strenuously opposed it at general and special hearings, but their supporting arguments were unfounded and easily parried by proponents of the measure.

Grover Ladner who spoke in rebuttal to objections made by opponents of the Bill, referred to them as "principally the spokesmen of the polluters who expressed largely the selfish viewpoint of those who put dollars above humanity." He said "all of them commence their argument by parading the amount of money invested in their respective industries and the



—Photo, Izaak Walton League of America

The Wages of Sin are Death

This bill will be of great assistance to the State of Pennsylvania in ending the evil of stream pollution so far as the navigable waters of the State are concerned.

By this bill, the National Resources Committee is empowered to cooperate with the appropriate agencies of the several states with a view of coordinating the activities of the several states relating to the prevention and abatement of stream pollution to encourage enactment of uniform state laws on this subject, to encourage compacts between the states for prevention and abatement of water pollution and to make studies, surveys and experiments and to devise methods for preventive and corrective measures.

To this end, the committee is authorized to collect and disseminate information, make the same available to state agencies, to assign experts to assist these agencies and to make and arrange loans for the construction of sewage disposal plants or trade waste treatment works.

The National Committee is directed, as soon as practical, to classify the navigable waters of the country into Sanitary Water Board Districts conforming to the interstate watershed areas.

The committee is authorized to fix standards of purity in each district for the navigable waters therein.

The National Committee is authorized, when these districts are established, to appoint in each district

edge on the subject of methods of prevention and abatement are gathered in one place. Experts are made available to counsel and assist the state agencies in their work to guard and protect the intra-state streams. Voluntary cooperation of industry and municipalities is made possible, and, at the same time, means are afforded to compel recalcitrant polluters to recognize their public duty.

Finally, means are afforded by which the request of the District Boards can be obeyed. This is in the form of outright grants to municipalities and part loans; and to private industries and corporations, loans to be repaid upon an amortization basis.

In order that Pennsylvania's municipalities can reap the full advantage of this bill, the resolution introduced by the Administration to amend the debt limit section of the Constitution, Section 8, Article IX, by adding at the end thereof the proviso that any municipality may increase its indebtedness to the extent of 3% over and above any limitation fixed therein toward the sole purpose of constructing or completing sewage treatment works, becomes extremely important.

The grants by the Federal Government under the Lonerган Bill will undoubtedly be conditioned upon the municipality bearing a fair share of the sewage disposal works. If this amendment of the Constitution is passed at this Special Session of the Legislature, and again passed at the General Session of 1937, by

amount of taxes paid by them. Each sought to influence the Committee to find a verdict on the false ground that the issue was a choice of industry or clean streams. By gross exaggeration and distortion of the facts they sought to develop the point that the passage of the Bill meant the destruction of industry."

He stated that "No such choice is necessary, and that both industry and clean streams can thrive side by side as they do in the Rhine and Ruhr districts, as well as other rivers that flow through industrial Europe. The restoration of fish and recreational uses in the cleansed stream are but by-products, additional benefits that will follow when the waters are purified in the primary interest of pub-

(Continued on page 17)



# CURRENT TOPICS

## Seasons and Bag Limits for 1936

### Small Game

Small game seasons for 1936 will be limited to 18 hunting days, the Board of Game Commissioners announced at the culmination of its regular meeting held at Harrisburg on July 2.

The season for small game and trapping will begin at 9:00 A. M. on the first day, November 6, and close at sunset on Thanksgiving Day, November 26.

Although curtailed somewhat over last year because of the inroads made on game of all kinds last winter, the season nevertheless includes three holidays,—election, armistice and Thanksgiving, also three Saturdays.

The decision to curtail the seasons and to reduce certain bag limits, according to sentiment previously obtained from sportsmen throughout the state, will meet with the hearty approval of the hunter.

A great many sportsmen's associations had asked for more stringent and even closed seasons for some species, but a survey by the Commission's field officers indicated that the prospective supply of small game would stand a limited season with certain reduced bag limits.

In the interest of safety, and better relationship between landowners and hunters, the Commission also decreed that the small game and trapping seasons shall not open until 9:00 o'clock the morning of the first day. The purpose of this regulation is to give the farmers an opportunity to get their morning chores done and to join in the fun when hunters descend upon their lands, and at the same time to prevent many hunting accidents which heretofore occurred during the early morning hours on the first hunting day.

In the further interest of safety, the Commission also recommended that parties hunting small game be limited to five. Landowners usually do not object to small groups of hunters on their farms, but strenuously object, and even post their lands, when large groups comb their fields repeatedly.

The bag limits for 1936 are: Wild turkeys, 1 a day, 1 a season. Certain counties are closed to wild turkeys, including Berks, Bradford, Bucks, Cameron, Carbon, Clarion, Clearfield, Dauphin, Elk, Fayette, Forest, Jefferson, Lackawanna, Lebanon, Lehigh, Luzerne, Lycoming, Monroe, Northampton, Pike, Potter, Schuylkill, Tioga, Warren, Wayne, Wyoming, and York.

Ringneck pheasants, male only, 2 a day, 8 a season; ruffed grouse, 2 a day, 8 a season; quail, 4 a day, 20 a season; rabbits, 4 a day, 20 a season; squirrels, 6 a day, 20 a season. The daily limit on raccoons was reduced from 3 to 2, the seasonal limit remaining unchanged at ten.

Because of their noticeable scarcity during the past few years, the season on snowshoe rabbits or hares was closed.

The season on Hungarian and Chukar Partridges and Rheeves Pheasants also remains closed.

Another important regulation adopted this year provides that a hunter may *not have more than two days bag limit of small game in his possession at one time.*

### Trapping Season

The trapping season, which will also open on the first day at 9:00 A. M., extends from November 6 to February 28, 1937, on Minks, Opossums, and Skunks; from December 1 to March 15 on Muskrats; and from March 1 to March 15 on Beavers. Muskrats and beavers may be trapped only. As a conservation move a closed season was declared on otters. Few of these valuable fur-bearers have been taken in Pennsylvania for a number of years.

Raccoons may be hunted or trapped from November 6 to December 31 in all counties of the state. For the past several years there were special seasons on raccoons for the northern and southern sections of the state, but this policy was abandoned by the Commission this year.

### Large Game

Only four days of bear season will be permitted this year—November 23 to 26 inclusive. Black bears are not as plentiful as they should be, and in order to maintain a normal breeding stock for the perpetuation of the species the Commission deemed it wise to limit the season to the above dates.

Male deer may be taken from December 1 to 12, inclusive. There will be no season on antlerless deer. The season on Elk remains closed.

### Waterfowl

Seasons on waterfowl and other migratory birds, fixed by the Federal Government, will be announced later.

*The above regulations will be printed on the back of every hunter's license.*

## THE CHESTNUT IN PENNSYLVANIA

The blight which has so long been killing our chestnut trees in Pennsylvania started over the State in 1912 and finally covered it, killing every tree and depriving our bear, deer, squirrels, turkeys, grouse and raccoons of the greatest food they ever had.

Today I am well pleased to report that in the several counties I have carefully checked I find the chestnut making a stronger comeback this year than in any year since the blight.

The best proof that the blight is dying out is that there are plenty of trees now from 10 to 12 ft. high, and from three to four years old, which are not blighted in any way. Some of the oldest trees did bear nuts last year and will have more this year.—C. E. Logue.

## TRANSFER GAME PROTECTORS

Continuing its field reorganization program, started some weeks ago by reassigning all seven Division Game Supervisors and various Traveling Game Protectors, the Board recently made the following transfers of District Game Protectors and Traveling Game Protectors:

Samuel B. Reed, Traveling Game Protector, St. Marys, Elk County, was transferred to State College, Centre County, to take the place of Traveling Game Protector T. C. Carlson, who was shifted from State College to Johnsonburg, Elk County.

Grant H. Gustin, District Game Protector, Lock Haven, Clinton County, was transferred to Hilford, Pike County, replacing John H. Lohman, the Pike County Protector, who in turn was shifted to Schuylkill County with headquarters at Pottsville. Mr. Lohman replaces Traveling Game Protector Leroy S. Jones, who recently resigned.

Reinhold Anderson, District Game Protector, Montrose, Susquehanna County, transferred to Gettysburg, Adams County, and Leo E. Bushman, the Adams County Protector, was sent into Susquehanna County to take over Mr. Anderson's post.

The Fulton County Protector, Fred S. Fisher, with headquarters at McConnells-town, was transferred to Mifflinburg, Union County, taking the place of Miles E. Reeder, who in turn was transferred to Clinton County with headquarters at Lock Haven.

Hugh H. Groninger, District Protector at Port Royal, Juniata County, was transferred to Perry County with headquarters at New Bloomfield, filling a vacancy temporarily assumed by Traveling Game Protector Herman Fisher. Mr. Fisher in turn was transferred to his original assignment as Traveling Game Protector with headquarters at Mifflintown, Juniata County, where he will automatically become Acting Game Protector until the vacancy in that County is filled later.

Traveling Game Protector Isaac Baumgardner, now established at Mt. Union, Huntingdon County, was promoted to the position of District Game Protector of Fulton County, with headquarters at McConnellsburg.

All of these transfers and appointments are being made solely to improve the service, according to the Game Commission, it being the purpose to give the field officers an opportunity to become more familiar with the different sections of the State, thereby broadening their knowledge and improving the general efficiency of the staff.

We would like to know just what in the way of special articles and pictures our readers prefer. We are serving a large number of sportsmen, and opinions naturally are diversified. Nevertheless, we believe we can come very near please. Let's have them.—*The Editor.*



## NEW LANDS CONVEYED

Title for nine tracts of game lands, totaling 3,175.10 acres, and located in four counties of the State have been vested in the Commonwealth since February, 1936. The aggregate area of State Game Lands now comprise 503,478.97 acres. The tracts conveyed since February are as follows: 2 tracts in Erie County, one of 99 acres adjoining game lands No. 102 and one of 38 acres, joining up with State game lands No. 101; 4 tracts in Fulton, one of 58 acres, one of 49 acres, one of 32 acres, and one of 25 acres, all adjoining game lands No. 49; 1702 acres in Bedford County, adjoining game lands No. 73; and two tracts in Lycoming County, one of 150 acres adjoining game lands No. 114, and one of 1020 acres, adjoining game lands 75.



Applicants for the Game Commission Training School participating in the examinations held at Harrisburg on June 20. Three hundred and forty-nine men competed.

## VAN DYKE HELPS GAME

Warren Van Dyke, Secretary of the Department of Highways, has issued instructions to his field force to use care when mowing driveways along State highways in order not to uncover or destroy the nesting game birds. This is a hearty spirit of cooperation which is greatly appreciated by the Game Commission and the sportsmen.

"I am most enthusiastic over the Morton story on *A Game Restoration Job for Everyone*. Told Mort. Palmer in Washington last week that he should publicize the proposed plan to utilize abandoned car bodies. Nothing mars a landscape more than an old automobile, and Mr. Morton has suggested a plan to put them into service which, by the way, is the only plan I ever heard of."—T. E. Doremus, DuPont Co., Wilmington, Del.

## FEW ELK REMAIN

Only a few Wapiti or American elk remain in Pennsylvania today. These animals were first stocked in Pennsylvania in 1912, when fifty were purchased from the Yellowstone National Park. Subsequently, in 1915, ninety-five additional animals were purchased from the same source. In 1922, twenty-two were released from a private preserve in Pike County, and in 1924 and 1926, six and four animals respectively were purchased from the Wind Cave Game Preserve in South Dakota. These one hundred seventy-seven elk are all that were ever stocked in Pennsylvania.

Elk were introduced in the following counties: Blair, Clinton, Clearfield, Cameron, Carbon, Centre, Elk, Forest, Lycoming and Monroe.

They were protected up until 1923, at which time twenty-three were killed. In 1924, ten were taken; 1925, six; 1926, nine; 1927, twenty-six; 1928, six; 1929, twelve; 1930, five; 1931, one—a total of ninety-eight. Since 1931 the season has been closed.

# Comments on Pennsylvania's New Farm Game Program

"Your letter of the 19th and the *GAME NEWS* have been received. I have gone over the article in the *News* carefully. It looks to me as though you were really going into a small game program in earnest, and I wish you real success. I feel that this program will be more difficult to work out than was the deer and large game program of the forested regions, which should make the attempt all the more interesting.

"As you go along there will no doubt be all sorts of complications not anticipated at this time. In general, however, you are on safe ground whenever you plant well selected feeds near good refuge cover, with nearby refuges to keep the stock from being killed too low. I am very glad to see that you are including large scale study and experimental areas, and are regarding the whole thing in a tentative light, not as a cut and dried program to be followed blindly wherever it may lead. In this way you are certainly on the right track."—HERBERT L. STODDARD, *Cooperative Quail Study Assn.*, Thomasville, Georgia.

"I have read your May number of the *PENNSYLVANIA GAME NEWS* with great interest and profit. History does not tell us how many wives Solomon experimented with before he learned how to handle them and even though he succeeded pretty well, men have been trying ever since to discover how to live peacefully and happily with one. Almost everyone has a different theory and the indifferent success is read in the daily dispatches from Reno. I am very much in hopes that Pennsylvania will prove itself to be the Solomon of State Game Management. Your state set out years ago on a definite principle of state-owned refuges, public shooting grounds, and wildlife production. Your success has far exceeded that of any other state in the Nation. There may be some discon-

tent and criticism even among your own sportsmen's groups but the fact remains that other states experimenting on different methods have not yet succeeded in producing the results which are apparent in Pennsylvania.

"The one hitherto neglected element of conservation activity has always seemed to me to be the small game feature, and after a careful analysis of your proposed program of smaller refuges for upland game, which shall become nuclei of units of game management and controlled shooting it seems to me that you have hit upon a method entirely consistent with your fundamental principles of state game development.

"Be careful not to make the same mistake that has been so frequently the experience in other states—that the early success of two or three projects leads you to establish new projects more rapidly than you can properly handle and control. And above all, do not allow criticism to lead you into the thought of altering Pennsylvania's established methods. There will be time enough for that when some other state has proved that another method is equally good, or better."—JAY N. DARLING, Des Moines, Iowa, (Former Chief, U. S. Biological Survey).

"I am writing to tell you how pleased I am with the new small game program as defined by you in the May issue of the *PENNSYLVANIA GAME NEWS*. Your proposals look sound to me all the way through.

"I am particularly pleased with your comments relative to cooperation with landowners which, of course, is absolutely fundamental to any progress that may be made.

"The whole proposal looks good, and I hope you will call on us for any assistance which you think we can render."—R. L. WATTS, Dean of Agriculture, State College, Pennsylvania.



RACCOON



WALK

EASY RUN

SUMMARY STATEMENT OF BOUNTY ALLOWED ON NOXIOUS ANIMALS DURING THE FISCAL YEAR OF JUNE 1, 1935—MAY 31, 1936

Counties	Wild Cat	Gray Fox	Weasels	Goshawks	Amount
Adams	0	103	934	1	\$1,351.00
Allegheny	0	50	583	4	803.00
Armstrong	0	93	1,223	2	1,605.00
Beaver	2	20	218	0	328.00
Bedford	4	202	1,198	13	2,131.00
Berks	1	117	3,005	12	3,548.00
Blair	0	117	1,113	12	1,641.00
Bradford	9	195	2,261	20	3,276.00
Bucks	0	189	2,159	11	2,970.00
Butler	1	49	1,372	0	1,583.00
Cambria	1	121	2,067	27	2,701.00
Cameron	5	226	45	4	1,044.00
Carbon	2	42	411	22	719.00
Centre	2	401	1,241	16	2,955.00
Chester	1	36	2,220	4	2,399.00
Clarion	0	41	1,327	1	1,496.00
Clearfield	1	357	2,136	15	3,654.00
Clinton	13	547	464	10	2,897.00
Columbia	2	62	1,188	19	1,561.00
Crawford	0	10	2,212	2	2,262.00
Cumberland	0	67	1,048	11	1,371.00
Dauphin	2	110	1,305	14	1,845.00
Delaware	0	9	445	0	481.00
Elk	1	78	491	7	853.00
Erie	0	4	1,487	7	1,538.00
Fayette	9	262	1,580	4	2,783.00
Forest	0	3	416	3	443.00
Franklin	0	107	820	7	1,283.00
Fulton	3	60	308	3	608.00
Greene	0	67	279	1	552.00
Huntingdon	1	243	1,402	25	2,514.00
Indiana	1	154	1,831	2	2,472.00
Jefferson	0	62	1,501	6	1,779.00
Juniata	0	86	553	8	937.00
Lackawanna	1	108	464	20	1,011.00
Lancaster	1	152	2,833	6	3,486.00
Lawrence	0	3	544	2	566.00
Lebanon	0	29	753	6	899.00
Lehigh	0	22	1,159	7	1,282.00
Luzerne	2	213	2,499	56	3,661.00
Lycoming	3	599	774	21	3,320.00
McKean	1	56	641	17	965.00
Mercer	0	9	805	0	841.00
Mifflin	0	132	572	7	1,135.00
Monroe	6	69	814	29	1,325.00
Montgomery	0	87	1,819	9	2,212.00
Montour	0	16	398	3	477.00
Northampton	0	61	935	5	1,204.00
Northumberland	0	76	991	8	1,335.00
Perry	0	109	858	18	1,384.00
Philadelphia	0	19	161	3	252.00
Pike	7	177	252	22	1,175.00
Potter	2	69	272	12	638.00
Schuylkill	0	189	2,310	23	3,181.00
Snyder	0	49	632	3	843.00
Somerset	2	209	4,334	3	5,215.00
Sullivan	4	53	397	24	789.00
Susquehanna	1	388	990	16	2,637.00
Tioga	1	151	687	16	1,386.00
Union	0	138	309	11	916.00
Venango	0	43	1,017	3	1,204.00
Warren	0	8	782	13	879.00
Washington	0	57	509	1	742.00
Wayne	0	376	445	29	2,094.00
Westmoreland	2	143	3,140	4	3,762.00
Wyoming	2	133	731	9	1,338.00
York	1	175	3,027	2	3,752.00
Total	97	8,408	77,697	701	\$116,289.00
Re-certified check					1.00
Number of claims for year, 39,958.					
Grand Total					\$116,290.00

SUMMARY SHEET OF BEAVERS TRAPPED AND KILLED IN PENNSYLVANIA DURING THE OPEN SEASON EXTENDING FROM MARCH 16, 1936 TO MARCH 31, 1936

County	No. Trapped
Adams	0
Allegheny	0
Armstrong	0
Beaver	0
Bedford	1
Berks	1
Blair	3
Bradford	69
Bucks	0
Butler	2
Cambria	30
Cameron	56
Carbon	47
Centre	67
Chester	3
Clarion	47
Clearfield	72
Clinton	93
Columbia	8
Crawford	16
Cumberland	14
Dauphin	11
Delaware	0
Elk	136
Erie	0
Fayette	0
Forest	337
Franklin	6
Fulton	6
Greene	3
Huntingdon	3
Indiana	2
Jefferson	70
Juniata	5
Lackawanna	10
Lancaster	0
Lawrence	0
Lebanon	0
Lehigh	6
Luzerne	134
Lycoming	81
McKean	114
Mercer	8
Mifflin	10
Monroe	89
Montgomery	0
Montour	3
Northampton	0
Northumberland	0
Perry	1
Philadelphia	0
Pike	84
Potter	96
Schuylkill	14
Snyder	2
Somerset	2
Sullivan	172
Susquehanna	38
Tioga	7
Union	12
Venango	39
Warren	181
Washington	0
Wayne	41
Westmoreland	0
Wyoming	0
York	9
Total	2261

Beaver were trapped and killed in 49 of the 67 counties of the State. Accidentally killed and confiscated pelts not recorded above—17.

SUMMARY SHEET OF BOUNTY ALLOWED ON NOXIOUS ANIMALS DURING THE MONTH OF MAY, 1936

Counties	Wild Cat	Gray Fox	Weasels	Goshawks	Amount
Adams	0	0	26	0	\$26.00
Allegheny	0	0	11	0	11.00
Armstrong	0	0	28	0	28.00
Beaver	0	0	7	0	7.00
Bedford	0	2	20	0	28.00
Berks	0	0	44	0	44.00
Blair	0	3	26	0	38.00
Bradford	0	1	60	0	64.00
Bucks	0	0	37	0	37.00
Butler	0	0	30	0	30.00
Cambria	0	4	62	0	78.00
Cameron	0	3	1	0	13.00
Carbon	0	0	17	0	17.00
Centre	0	4	28	0	44.00
Chester	0	0	55	0	55.00
Clarion	0	1	13	0	17.00
Clearfield	0	7	26	0	54.00
Clinton	0	4	22	0	38.00
Columbia	0	1	32	0	36.00
Crawford	0	0	68	0	68.00
Cumberland	0	0	26	0	26.00
Dauphin	0	0	17	0	17.00
Delaware	0	0	27	0	27.00
Elk	0	0	23	0	23.00
Erie	0	0	60	0	60.00
Fayette	1	8	54	0	101.00
Forest	0	0	7	0	7.00
Franklin	0	2	16	0	24.00
Fulton	0	1	4	0	8.00
Greene	0	1	7	0	11.00
Huntingdon	0	3	32	0	44.00
Indiana	0	4	25	0	41.00
Jefferson	0	3	25	0	37.00
Juniata	0	1	13	0	17.00
Lackawanna	0	1	14	0	18.00
Lancaster	0	12	55	0	103.00
Lawrence	0	0	16	0	16.00
Lebanon	0	0	16	0	16.00
Lehigh	0	0	36	0	36.00
Luzerne	0	9	60	0	96.00
Lycoming	1	6	17	0	56.00
McKean	0	0	49	0	49.00
Mercer	0	0	24	0	24.00
Mifflin	0	5	12	0	32.00
Monroe	0	1	15	0	19.00
Montgomery	0	4	31	0	47.00
Montour	0	0	4	0	4.00
Northampton	0	5	25	0	45.00
Northumberland	0	0	22	0	22.00
Perry	0	0	8	0	8.00
Philadelphia	0	0	0	0	.....
Pike	1	0	3	0	18.00
Potter	0	3	8	1	25.00
Schuylkill	0	1	68	0	72.00
Snyder	0	1	13	0	17.00
Somerset	0	5	98	0	118.00
Sullivan	0	0	4	0	4.00
Susquehanna	0	3	14	0	26.00
Tioga	0	4	14	0	30.00
Union	0	0	7	0	7.00
Venango	0	0	17	0	17.00
Warren	0	0	27	0	27.00
Washington	0	0	20	0	20.00
Wayne	0	2	8	0	16.00
Westmoreland	0	0	65	0	65.00
Wyoming	0	0	13	0	13.00
York	0	1	47	0	51.00
Totals	3	116	1779	1	\$2,293.00
Re-Certified Check					1.00
Grand Total					\$2,294.00
Total claims for the month—951.					

WOLF



SLOW TROT

QUICK TROT

GALLOP





# BIRD LORE

—Photos by Miss Esther Heacock,  
Wyncote, Pa.

Left: Nuthatch at Coconut  
Feeder.

Right: Hummingbird at artificial  
flower containing a pill bottle  
filled with sugar water.



Robin which accidentally hung itself while building nest. —Asso. Press



Left: Wren at nest  
box.

Right: Catbird at  
apple-suet feeder.

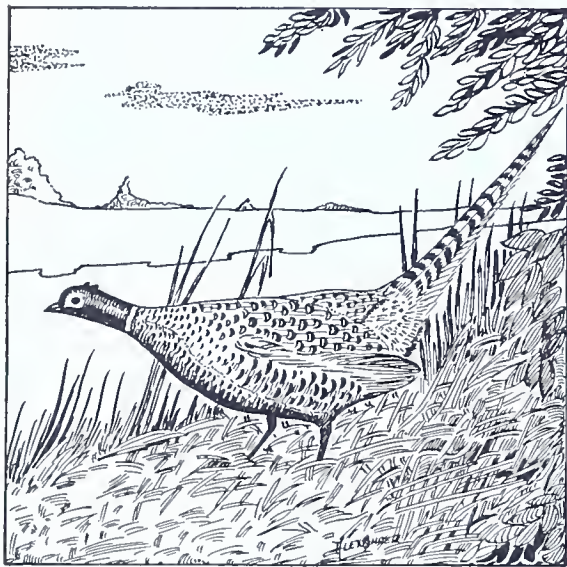




# "Maybe I'm Wrong!"

*Mr. Ringneck States His Case for Your Consideration*

*By Robert C. Raines*



I WAS born on a hay meadow in early June; with me were four brothers and five sisters. My mother named me Ringneck. We had a bad scare while still in our first home; the man who owned the meadow drove his mower over our nest; we hugged the ground and my mother walked away, pretending lameness, to attract the man's attention.

As youngsters we were cause for considerable anxiety on the part of our parents...they tried to have us understand that we must constantly guard against minks, weasels, cats, dogs, crows, and hawks; also that it was not necessary to become too sociable with man. Instinctively we were cautious. We became expert in our ability to slip away unnoticed and in concealing ourselves under small objects.

Our first summer was a happy one. We learned to run and hide, and in late summer, had our first lessons in flying. We enjoyed a variety of foods, consisting of weed seed, grasshoppers, and bugs. At harvest time we moved to a nearby cornfield and went to our old home at sundown for rest.

I remember that our dad returned late one evening and I could sense that he was worried. He had attended a meeting and the report was given out that an open season on pheasants was granted by the State Fish and Game Department, and, in a few days, men would be permitted to hunt and shoot.

I had quite an understanding as to what was meant as my dad walked with a limp and our mother had told us his lameness was caused by a shot striking him when he was a young fellow. Next morning we were subjected to a long lecture. We were told to keep our eyes open for men with guns. Never had I seen a gun but I knew they were dangerous, and also that I did not care to be crippled.

It was just after the noon hour of an October day that I heard the first report of a gun—it came from westward. We huddled and watched for a signal—I trembled like a leaf. Soon, we saw men walking toward us through the cornfield.

Our entire family headed east. One of my brothers becoming confused, ran in the wrong direction. I saw him rise out of the corn and start our way—two shots rang out almost simultaneously and he fell.

Things may have been well with us, but, just as we reached the end of the cornfield, another group of hunters showed up and there was nothing left for us but to flush and take our chances. Since this first experience I have had several quite as exciting, but this first one will remain in my memory always.

The noise and confusion were terrifying—I saw my mother go down, then two brothers and three sisters. I wanted to stop and help them, but following my dad's instructions, I flew like mad away from the scene.

That evening at sundown the surviving members of our family assembled on our old home grounds to mourn the loss of a mother, three brothers and three sisters. I am alive today by reason of good luck—

There is something strange about these men who delight in hunting pheasants. They do everything possible to knock us off during the open season but, before and after, they are kindness itself. I recall last winter; food was very scarce and many of us all but perished for the want of things to eat—a wet snow, followed by zero weather, left our entire food supply frozen down.

Then the hunters came to our rescue with corn and other grains and scattered them for our benefit. The farmer, too, was kind and permitted us to enter his barnyard without a thought of doing us harm.

We are not complaining but would have you know that the life of the pheasant is not all sunshine. We try to avoid harming others but ours is a battle for life from start to finish. Frequently, during the closed seasons, we come near to your highways and pose for those passing by...they appreciate our efforts and oft-times slow down and even stop to watch us.

We live in a beautiful country, but I am sure you will pardon me for saying that the male pheasant in his gorgeous plumage helps considerably in beautifying the landscape.

Now, just these words in closing...You are the boss—we admit that—but give us a break—we need it and we know a good sport when we meet one. I am only a Ringneck and

**MAYBE I'M WRONG!**

*Reprint courtesy Modern Game Breeding*

## BEWARE OF WOOD TICKS

There is need for vigilance against the wood ticks or dog ticks that spread the red spotted fever, according to a recent announcement made by Dr. F. C. Bishopp of the United States Department of Agriculture. The disease, according to Doctor Bishopp, is widespread and has a high mortality.

Doctor Bishopp emphasizes the importance of confining dogs in yards throughout the tick season and of examining them frequently. Every tick, he says, should be pulled off the dog with forceps and dropped into a can of kerosene. Ticks that have fed on a dog for a few hours are immediately dangerous, but they are not likely to detach until fully fed and the engorged females will not reattach. As the disease can be contracted from crushed ticks, through cuts or scratches, it is a safety measure to wash the hands thoroughly after touching ticks. Derris powder may be scattered lightly over heavily infested dogs. This kills any ticks on the dog and tends to repel others.

If it is necessary to go into tick-infested places it is advisable to wear high-top shoes over army type trousers and systematically to examine the body and head at least twice a day. One of the favorite places of attachment is in the hair at the base of the head. Ticks are not likely to transmit the disease unless they remain attached for at least six hours.

Ticks are very hardy, Doctor Bishopp says. They can live from year to year with no food. Adult ticks put in vials without food on April 10, 1933, for observation, are still alive and vigorous. Hence it cannot be assumed that an area is tick-free, even if all the animals on which they might live have been driven out or destroyed in one season.

Besides being carriers of spotted fever, ticks sometimes cause a form of paralysis. The effects of their bites often persist for months.



## EGRETS INCREASING

Since they were given protection by the Federal Government a number of years ago, the American egret has increased considerably in numbers and now is observed along the many Pennsylvania waterways.



# A Hunter Practices for His Sport

By G. Calvin Christman



**P**RACTICAL knowledge of ballistics and constant practice are two invaluable aids to any hunter. Few things will give him a better, more workable understanding of firearms and their correct use than target practice on the range. The knowledge and ability thus gained help to equip him more thoroughly to meet the obligations of his sport.

Better understanding of trajectory and the more obscure operating principles and general limitations of the modern rifle will result in better marksmanship and better hunters. Intelligent, conscientious use of the rifle range will foster greater safety to hunters and others, cleaner, quicker kills on game and fewer cripples, with resultant increase in conservation of wildlife.

In the accompanying picture is shown a Pennsylvania hunter improving his ability as such through practice on the

small-bore rifle range. He is Warren Bauman, Jr., a veteran in hunting experience, who, besides regular trips to the Pennsylvania deer country, has killed thousands of destructive pests in a steady campaign on vermin. Sportsman Bauman believes that no hunter is better than his tools and his ability to use them, and he frequently takes trips to the rifle range for the purpose of improving himself in the use of the rifle.

By conscientiously meeting the requirements for good target shooting, he has come to learn the finer points of rifle shooting and to appreciate the potentialities and limitations of the rifle in the hunt for game. He is shown here behind a highly specialized target rifle on the picturesque range of the Green Hill Rifle Club, in the beautiful Perkio-men Valley, upper Montgomery County.

## LONGERGAN POLLUTION BILL

(Continued from page 5)

lic health and comfort. It is highly significant that the municipalities of the country have voiced no objection."

Ladner said, "the consciences of the spokesmen of the polluters were evidently silently accusing them, for scarcely without exception they gave 'lip service' to the cause of pure streams. Some figuratively shed crocodile tears at the havoc they were wreaking on the waters of the nation and pretended to deplore the fact that they were unable to do otherwise. They may have salved their own consciences by this procedure, but merely being sorry for wrong done without joining whole-heartedly in a movement to remedy that wrong convicts them of insincerity."

"Illustrative of the exaggeration indulged in by the polluters' spokesmen," said Mr. Ladner is the argument that the Bill is so broad in its scope as to extend the jurisdiction of the Federal Government over the tiniest trickle of water in the land. The jurisdiction of the Federal Government is over the navigable waters of the country. These it may legislate to protect. As a necessary corollary of its right to protect the navigable rivers, Con-

gress must also have the power to legislate against pollution in a tributary thereof to the extent, but only to the extent, that the pollution is carried into and affects the navigable waters. The purpose of this 'tiniest trickle argument' is evident. It seeks to arouse the States to oppose this Bill as an unwarranted invasion of their rights.

"Somewhat similar he pointed out, 'is the argument voiced that the Bill is an unwarranted interference in the affairs of the States. We say the purpose of the Bill is plainly to cover a field in which the States are unable to act effectively. There is enough work to cleanse, safeguard and protect the non-navigable waters from the pollution evil to keep the State agencies busy for an indefinite time. In fact, much more work than the respective States are able to spend the necessary funds to do.'"

In rebutting the opposition Ladner further claimed that "many of the polluter spokesmen pretended that further investigation is needed to solve the problems of the industries. If ever a subject has been investigated to death it is the question of stream pollution. What the public wants is action not talk: enforcement on polluters of a decent regard for public health and fellow man. Bureau-

crats and experts love investigations. This insures perpetuation of their jobs and reports hurt no one. Polluters don't care how much public money is wasted on investigation so long as they are not interfered with."

"An attempt was made to scare the Committee by exaggeration as to the probable cost of correcting stream pollution under the plan of this Bill."

The Deputy Attorney General replied by pointing out that the proponents had shown that no reliable estimate exists of the cost of treating trade waste discharged directly into the waters, and that bearing in mind the recovery of profitable by-products, the cost will probably not be more than that of handling domestic sewage problems. Whatever it be, however, will be passed on by the industries to the public in the cost of the manufactured products, he claimed.

"So far as sewage is concerned," Ladner said "the total cost will not be more than 500 million. If as contemplated, one-half be paid as a direct grant by the Federal Government this means only 250 millions. Spread over a five year program it means only 50 million a year or about 2 cents per person of the population served."

"We have spent far more for less worth improvements," he concluded.

## THE KINGBIRD

By GEORGE M. SUTTON

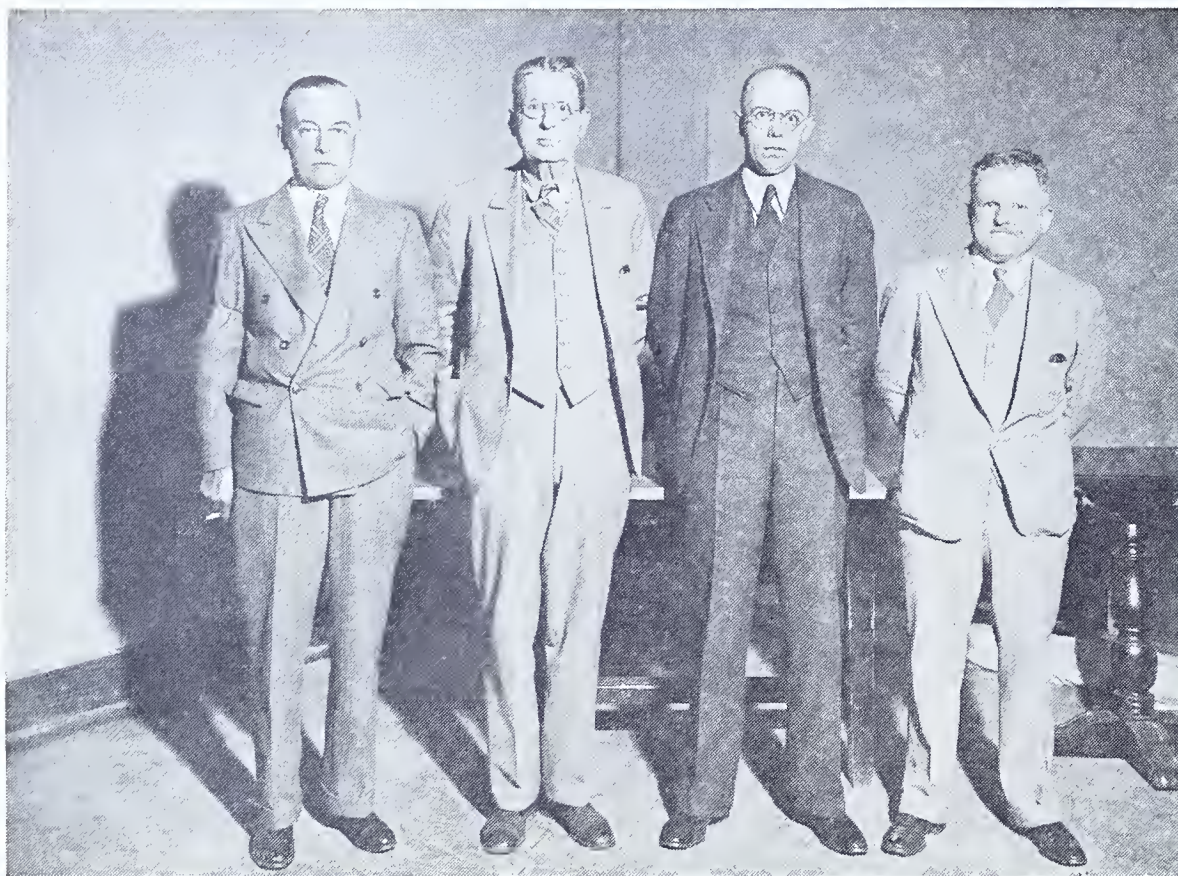


**T**HE Kingbird is often to be seen on a barbed wire fence, telegraph wire, or prominent dead stub where he watches for passing insects or for hawks or crows, which he chases

with energy and effect. As he flies, his wings beat rapidly with a fluttering motion, and the white tip of his widely spread tail shows plainly a considerable distance. His challenge note, which may be written pi-tink, pi-tink, irregularly repeated, is the only outcry usually heard, though he occasionally indulges in a softer effort which may be called a song. If a small pebble is tossed at him in play, he watches it carefully in a curiously puzzled fashion, as though he were at the point of capturing and swallowing it. He has some difficulty in tiring and capturing insects as large as a dragonfly, but he is very fond of these strong winged insects, and pursues them assiduously. Rarely he captures bees, and these are usually drones.

He is at his best when he chases a hawk, owl, or crow. At such times his anger mounts and he gives battle with all the fury of his small body thrown into the noisy and vicious attack. So determined a combatant is he that he sometimes actually alights on his larger, more awkward enemy, picking at the plumage, and perhaps at the skull and eyes.





(A) Here are the officers of the of the Presque Isle Sportsman's League, livewire organization with a membership of 1,700 Erie County nimrods and anglers. Left to right—Ralph W. Swan, vice-president; James C. Hadley, treasurer; William A. Schildmacher, secretary; and Dr. John J. Koehler, president.



(B) Over 700 members of the Presque Isle Sportsman's League, Erie County, turned out for a recent social session of the organization, at which motion pictures furnished by the Game Commission and Fish Commission were shown. Here's a photo of the group.

## WITH THE CLUBS

Mr. Hartman, President of the York-Adams Sportsmen's Assn. proudly exhibited a "Flushing Bar" before a group of hunters, many of whom were farmers, at a recent meeting held at Hanover. He urged landowners to use the bar during the grain and hay harvest.

The Lancaster County Fish and Game Protective Association has manufactured about 20 flushing devices which were distributed to farmers throughout that sec-

tion. This is a commendable program and one which many more clubs should undertake.

The Consolidated Sportsmen of Lycoming County are carrying on an extensive food planting program and are furnishing various seeds, particularly kaffir corn, to farmers who are planting it in ringneck and quail country. The sportsmen are also planting sweet clover, rye, buckwheat, millet and soy beans.

## HERE AND

The Waynesboro Fish & Game Protective Association has been carrying on an extensive food planting program. Their first step was to enlist the aid of the farmers of that vicinity and the Secretary of the club reports that the following have planted from ½ to ten bushels of buckwheat on their respective farms: Mr. Robert Johnson, 2 acres of buckwheat; Waynesboro Country Club, 2 acres of buckwheat, ½ acre of millet; James Seilhamer, 1½ acres of buckwheat; Mr. Grim, ½ acre buckwheat; Mr. Pentz, 1 acre; Dr. Barr Snively, 1 acre; R. R. Arthur, 1 acre; Mrs. E. D. Hoffman, 1 acre; W. H. Stevenson, 10 acres; James Brinkley, ½ bushel which is to be planted on some old charcoal beds which will make excellent grouse feeding; Robert Boerner, 1 acre; George Swisher, ½ acre, and the Soil Erosion Company, 5 acres.

The Northboro Sportsmen's Association is conducting a vermin drive during May, June and July. The contest is open to members only. Banded crows will be \$1.00 each.

The Perkiomen Valley Fish, Game and Forestry Association recently started a drive to control harmful species of wildlife. Prizes will be awarded for the largest kills of crows, and watersnakes.

The Mt. Jewett Sportsmen's Club, Morris Nelson, Secretary.

### SPORTSMEN ADOPT PLEDGE

Any hunter can wear a button or emblem presented him when he joins a club, but that does not necessarily make him a true sportsman. The Westmoreland County Sportsmen's Association, which has been issuing such emblems for sometime, recently put some strings and ribbons on their buttons which requires that an application and pledge be signed and presented to the Secretary before one is issued. The club believes that only true sportsmen will apply for them.

#### THE PLEDGE

I pledge myself as a sportsman member, that I shall absolutely obey the Game and Fish Laws, will be considerate of the rights and property of others and appreciate the privilege of hunting or fishing upon their land.

I will consider it an honor to be permitted to wear the emblem of the Westmoreland County Sportsmen's Association and herewith make application for one of their buttons for my own use only.

If convicted by my own conscience or evidence of others that I have violated law, done damage to others without having acknowledged and making amends, or been untruthful or ungentlemanly:—This is your authority to ask and demand the return of the emblem, without recourse, unless I demand a trial by those authorized to hold a hearing.



# HERE WITH THE SPORTSMEN

## PEWTERBAUGH MOUNTAIN HUNTING CLUBS MOVE TO PROVIDE FOOD FOR GAME

A group of twenty-five property owners and hunting club members at a recent meeting decided to plant sweet clover, rye, buckwheat and sunflowers in waste lands located along the left branch of Larry's Creek, Lycoming County, for deer food.

H. E. Neff, a farmer from the district, was authorized to direct the plowing and seeding of the lands.

Samuel C. Castner, member of the Game Commission, expressed the belief that "the sportsmen are on the right track and that other clubs should do likewise."

## ORGANIZE JUNIOR CLUBS

There are just a few of our major sportsmen's associations throughout the State which have given serious consideration to the formation of Junior Clubs. This is a serious mistake, for it not only tends to make the young men of a community feel that they are being ignored, but it considerably retards the great work of wildlife conservation.

Many of our youth are willing and anxious to participate in this great work, some of them to the extent that they have formed associations of their own. It is a sad state of affairs, however, when our boys—all conservationists of the future—are forced to paddle their own canoe in an effort to learn the fundamentals of Pennsylvania's game program. What our major clubs should be doing today is taking these young men under their wing and forming junior clubs within their own organizations. Give them their own constitution and by-laws, or let them function under your rules and regulations.

Set up a year-round program for them to follow, such as is outlined in the article on Page 9 pertaining to the work of the 4-H clubs.

Winners of best of breeds at recent Capital City Field Trial Outing.

Left to right: German Short Hair, Minnahaha, owned by M. G. Shaffner, Harrisburg; Irish Setter, Joffra J. Rookwood, owned by A. F. Jones, Harrisburg; English Setter, Gladstone Donny, owned by W. W. Douglas, Harrisburg; and Pointer, Hexers Carolina Jack, belonging to Dr. E. K. Tingley, Marietta.

## A HOUSE WITHIN A HOUSE

Five Perkiomen Valley (Montgomery County) sportsmen didn't have the time or money to build a much wanted hunting cabin away up in Potter County, so they assembled one in sections on the top floor of a former hay house. Here they found ample room for their building operations, together with the added convenience of electricity and the natural comfort and protection afforded by the large building. Even the lumber and other necessary materials were close at hand, for the building itself is used by the Allebach firm for lumber storage and the firm deals in such other materials as went into the construction of the cabin.

The cabin is so designed and has been constructed in such a way that it can be dismantled in sections with very little difficulty. The sections will be transported, some time this summer, to Potter County, by truck, and there re-assembled.

It is 12 by 16 feet and one and one-half stories in height. The roof can be dismantled into six sections, each floor into three sections, the sides into ten sections. Each gable constitutes a section.

## SCHEDULE BIG FIELD DAY

The Washington County Sportsmen's Conservation League will hold a large Field Day and Picnic at City Park, Washington, Pa., on July 25. Plans include an address by Seth Gordon; Fly and Bait casting, running deer and rising bear target competitions, small and high power rifle shooting, trap shooting, pistol shooting, band concerts, and everything else that goes to make an interesting day for sportsmen and their families.



T. Clarence Marshall, Yorklyn, Delaware, recently elected vice-president of the Eastern Division of the American Trap Shooting Association. For a number of years Mr. Marshall has promoted trap shooting, and some of the most popular tournaments in the country took place over the Yorklyn, Delaware traps, a few miles from Kennett Square, Pennsylvania.

The 1936 blue ribbon tournament takes place on the Marshall grounds, August 11-15, inclusive. Some of the world's best shots, including many Pennsylvanians, attend this annual event.







—Photo by W. M. Dippold, Kittanning  
"Blackie" caught off guard.

## RICHARD H. POUGH TO DIRECT HAWK AND OWL CAMPAIGN

Mr. Richard H. Pough, of Philadelphia, initiator of the movement to establish Hawk Mountain Sanctuary, near Dreherstown, Schuylkill County, and one of the original members of the Hawk and Owl Society, has been appointed director of the Hawk and Owl Campaign for the National Association of Audubon Societies, as the successor of the late Warren F. Eaton,

He was born on April 19, 1904, in Brooklyn Friends' Academy. After graduation by Massachusetts Institute of Technology in 1926, he spent a year in graduate work at Harvard. Two summers were also devoted to field studies at the University of Colorado, and at Heidelberg.

Mr. Pough possesses an advantage not shared by many bird students, in that his mother was a biologist who, also, was graduated by Massachusetts Institute of Technology. His interest in birds dates from his tenth year and has taken him, as a student of birds, into forty-five of the forty-eight United States. He is a member of the Delaware Valley Ornithological Club, the Cooper and Wilson Clubs, a past Director of the Brookline Bird Club, and past President of the St. Louis Bird Club. During the past five years he has been in the photographic supply business in Philadelphia.

A recent dispatch from Naples, Italy, says:

"Eight thousand birds have been let out of jail by the Naples police. Following an investigation of illegal trapping of birds with nests, the carabinieri 'confiscated' the live prey. The birds were set free. The trappers will be fined."

## THREE "CANADAS" BY BISHOP TO FLY ON 1936 DUCK STAMP

The Federal duck stamp will be a goose stamp this year, according to the U. S. Biological Survey.

Third in the series started two years ago, the new migratory bird hunting stamp, universally called "duck stamp," will show three Canada geese on the wing, one with a Biological Survey bird band on its leg. The etching for the stamp design is the work of Richard E. Bishop, sportsman and artist of Mount Airy, Pa.

Selection of Mr. Bishop's work, says the Bureau, means a continuation of the artistic value of the duck-stamp series. The first stamp was based on a design of mallards by J. N. "Ding" Darling, and the current stamp depicts canvasbacks by Frank W. Benson. Copies of the first stamp can no longer be purchased at post offices, but the 1935 stamp will remain on sale until June 30th. The new stamp, which will be available July 1st, will add another species to the series and also an example of the work of another sportsman-artist.

Possession of a duck stamp is required by law of every migratory-waterfowl hunter over 16 years of age. In addition, many stamp collectors buy the duck stamps, and some conservationists have bought in quantity. Ninety per cent of the proceeds from the sales go into Federal funds for migratory waterfowl refuges.

"It is the plan of the Biological Survey," says H. P. Sheldon, Chief of the Division of Public Relations, "that each issue of the stamp should have a value beyond that of the privileges which its possession conveys. If you never kill a duck you will still have acquired something that gives any sportsman a thrill whenever he looks at it."

## I. W. L. A. PLATFORM

The 14th Annual Conference of the Izaak Walton League of America held in Chicago recently, included in its permanent conservation program a plank to the effect that every State in the Union be urged to include a qualified aquatic engineer on its highway staff, or acquire consultation with the engineers of the State Fish and Game Departments of the various states or of the Federal Government, to the end that where possible and feasible highways may be built with consideration for the best needs of water conservation.

The League also passed resolutions endorsing the work of Senator Lonergan and his committee in connection with the development and passage of adequate pollution legislation for the United States; and approving the principle of teaching wildlife conservation and restoration in the public and private schools of America.

## DEER FALL INTO GORGE

Last winter twenty deer fell over the rocks into Pine Creek Gorge, near Tiadaghton, Pike County. At the foot of one high precipice eight deer lay dead at one time which had slipped on the snow covered ice and fallen hundreds of feet to their death.

At Falling Springs a railroad employee saw a doe browsing on the steep slope near the top of the gorge. Suddenly she stepped on some snow-covered ice and came crashing down over the precipice, which is seven hundred feet high at that point.—L. H. Wood, Wellsboro.



Old bear traps found by ex-refuge keeper John B. Rearick, one in Elk and one in Forest County. Size over all, 34 inches. Ravages of time account for missing pan on one trap. Made by old village blacksmiths. Photo and data contributed by Dr. B. D. Hetrick, Butler.



## COYOTES

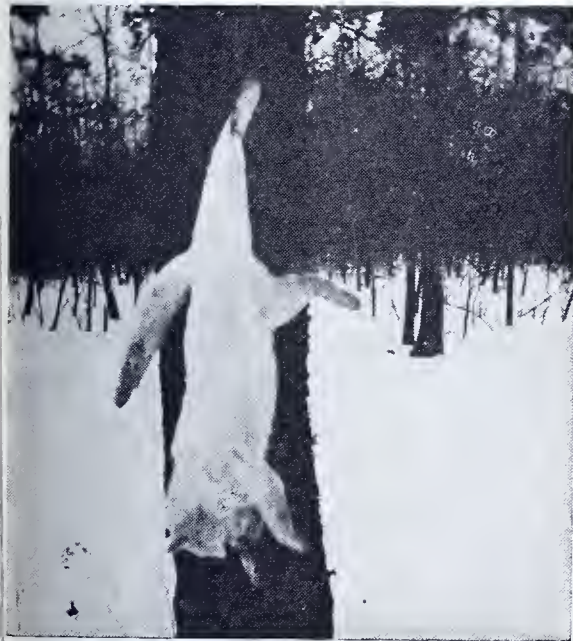
A coyote was sent to the office some time ago by Refuge Keeper Ralph H. Ewing, of Pold, Venango County. It was killed on North Sandy in this county by a Mr. Mushrush after a long chase by several old coon dogs. The dogs were afraid of it.

Other coyotes have been killed in Pennsylvania—all animals which escaped from or were turned loose by the people who owned them.

## RACING PIGEONS

Hardly a year goes by but that a racing pigeon does not come to earth exhausted in the vicinity of the Capitol grounds, Harrisburg, and the other day one of these carriers was brought to the office of the Game Commission for examination. It was unhurt, and after having been fed, watered and allowed to rest over night, the bird was released.

The number on the band was ACA-290-AH35.



This large half-wild feline was killed by refuge keeper, Ralph Ewing, Polk, Venango County.

## SWALLOWED HIS BROTHER'S LEG

A young robbin swallowed his brother's foot and died. The fatal accident was discovered by Mrs. Harry Rickert, Allentown. A commotion made by the parent robbers attracted Mrs. Rickert's attention who found two young birds at the base of a cherry tree. One was alive, the other had choked to death. A piece of tape was in the mouths of both young birds and they were held fast together. Apparently the bird which lost its life tried to free itself from the tape and in some manner got the other bird's foot down its throat. The surviving bird was placed in the nest.

## "CREEPERS" ROUTE WILDCATS

There is a growing popularity of the courageous little "creeper" (terrier) dogs for routing foxes and wildcats from their dens, and that they are worthy of their mettle has been enthusiastically borne out by more than one hunter.

## "BANANAS" NEW DIET FOR HUNGRY DUCKS

Wild ducks in scores of states soon are to have bananas as a new diet. And the fruit, found to be one of the finest wild duck foods, is to grow naturally right in their own duck ponds, according to the More Game Birds Foundation.

The new waterfowl food is not to be introduced from the great banana plantations of Central America, however. Botanists discovered it growing in the coastal marshes of states bordering the Gulf of Mexico. They labelled it "Castalia Mexicana."

Residents of the Gulf coast have named the plant banana waterlily, because of the striking resemblance of the "hands" of yellow tubers which it produces to bunches of fruit store bananas.

The tubers, or bananas, and other parts of the plant furnish food for enormous numbers of wildfowl in the Gulf states. Now, for the first time, the plant is to be introduced in sections of other states by supplying them without charge to sponsors of migratory bird refuges.

Edward L. McIlhenny, explorer and conservationist, of Avery Island, La., is to collect 50,000 banana waterlily tubers and 50 bushels of gray duck moss, another waterfowl food, for planting on 50 new waterfowl refuges in various states. McIlhenny is donating the plants for awards in a national waterfowl refuge contest being conducted by the Foundation.

"Although the banana waterlily is native to only a small portion of the United States, it can be successfully grown over practically the whole country," the U. S. Bureau of Biological Survey declares.

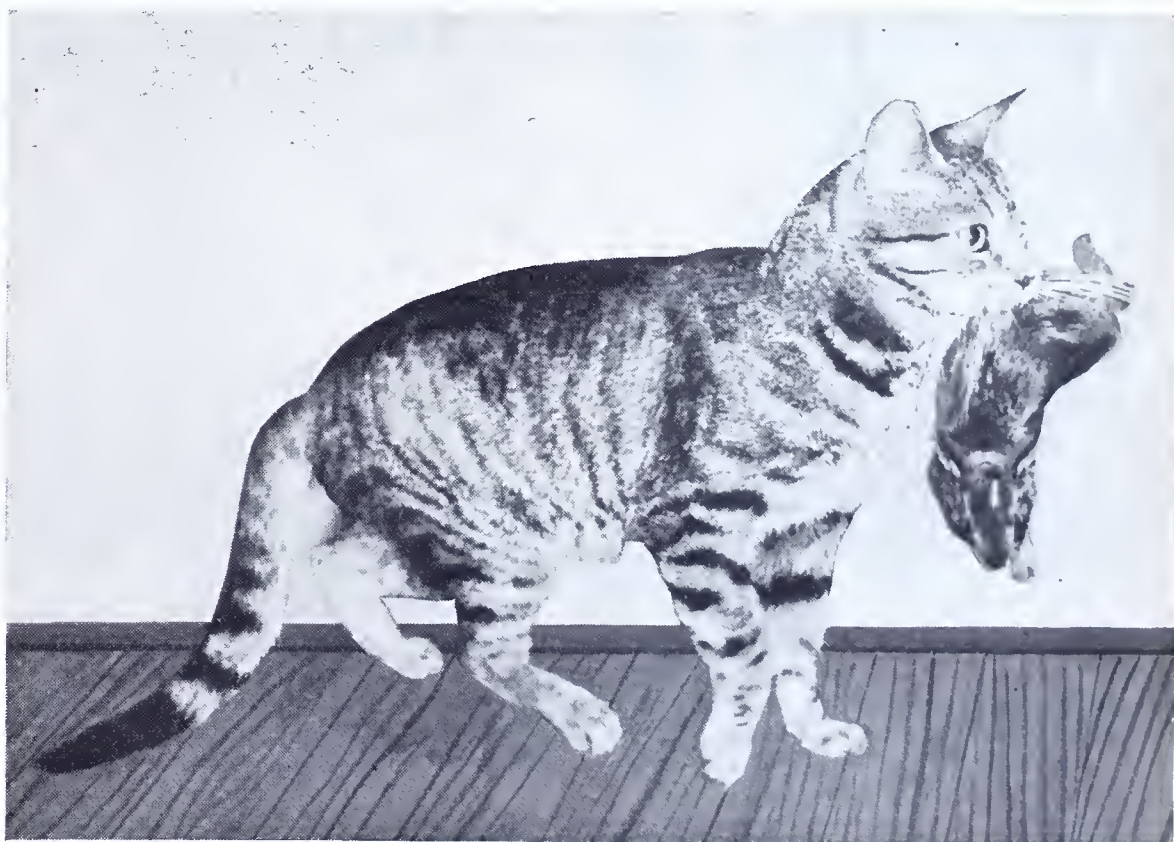


—Photo by F. W. Fisher, Paradise, Pa.

Treed—one opossum

An old fishing creel hung on the back porch will often attract wrens.

Owls are more closely related to night-hawks and Whippoorwills than they are to hawks and eagles.

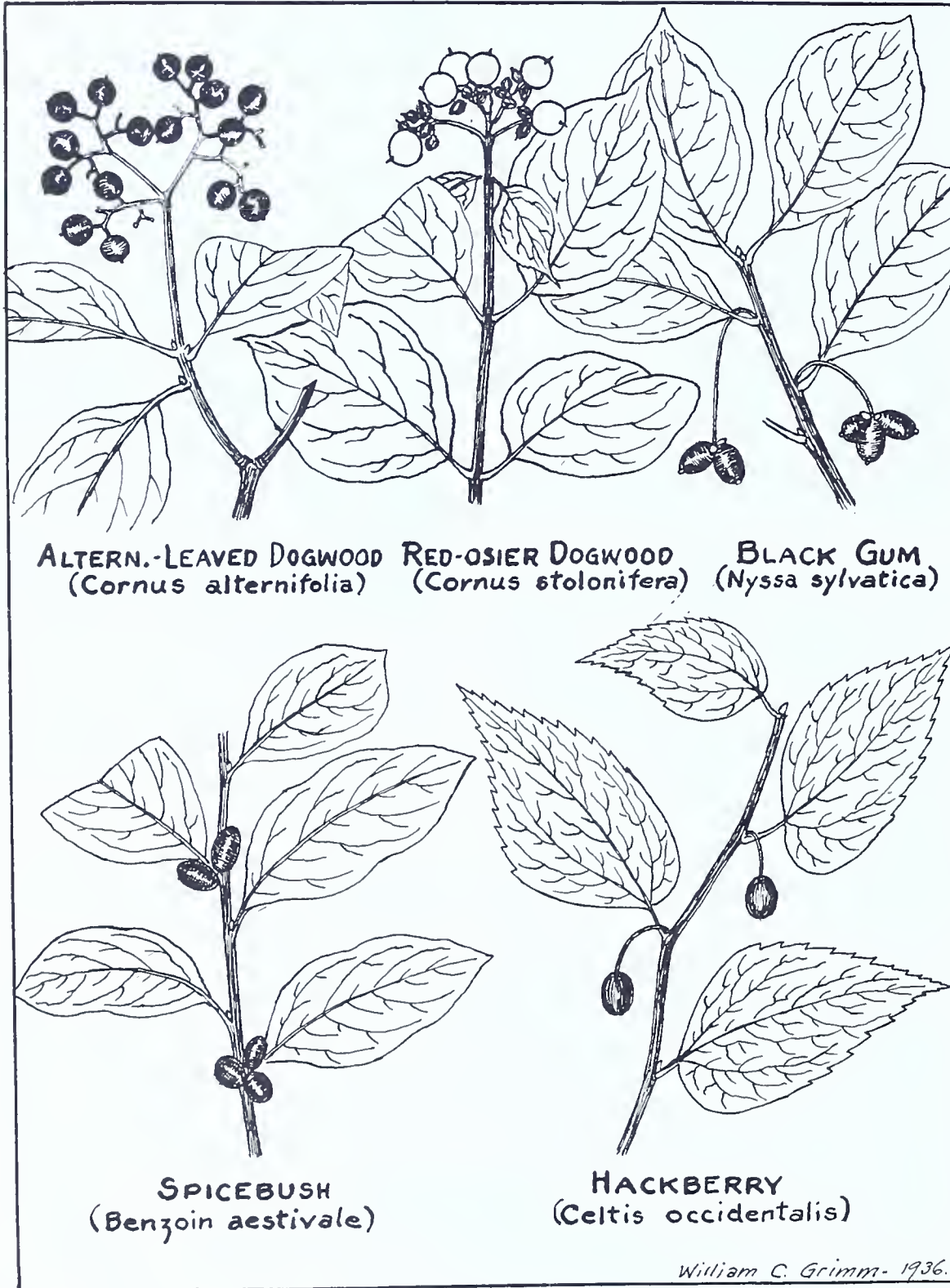


Even the so-called harmless house cat sometimes breaks the barrier and catches birds or young rabbits, no matter how well fed it may be.



# Planting Food For Wildlife

By William C. Grimm



## GAME LANDS EXTENDED

The Game Commission recently approved the purchase of 17,136 acres of good game territory scattered throughout eighteen counties in the State. The titles for the different tracts will be examined in the near future, and if satisfactory, conveyance will be made to the Commonwealth as rapidly as possible.

In Fulton County, 2,436 acres were offered in Union, Bethel, and Brush Creek Townships. These tracts connect and comprise farms and woodlands and will furnish excellent small game refuges and

shooting grounds. 230 acres were also added to State Game Lands No. 53 in Licking Creek Township in Fulton County. This is good deer, turkey, grouse and rabbit cover.

An offer of 990 acres was made in Lycoming County, adjoining State Game Lands No. 75.

Other offers include: 170 acres in Perry County, connecting State Game Lands No. 88; 450 acres adjoining State Game Lands No. 55 in Columbia County; 25 acres in Cambria County, which will be-

(Continued on page 23)

EDITOR'S NOTE: This is the fourth of a series of articles by Mr. Grimm on what, how, when and where to plant food bearing trees and shrubs for game.

### ALTERNATE-LEAVED DOGWOOD (*Cornus Alternifolia*)

Description: A small tree with alternate, simple, entire leaves. Bark on young stems is greenish striped with white. Fruit dark blue, spherical, in open flat-topped clusters.

Propagation: See Flowering Dogwood—in previous issue.

Desirable qualities: Provides food for birds and may be used ornamentally.

### RED-OSIER DOGWOOD (*Cornus stolonifera*)

Description: Tall shrub, the twigs and shoots bright purplish-red. Leaves opposite, entire, pointed. Fruit dull whitish. Prefers wet locations.

Propagation: See Flowering Dogwood, may also be propagated by transplanting of root suckers.

### BLACK GUM (*Nyssa sylvatica*)

Description: Medium sized tree. Leaves alternate, simple, entire, shiny above. Fruit dark blue, berry-like, in small clusters on long stalks.

Propagation: See Flowering Dogwood.

### SPICE BUSH (*Benzoin aestivale*)

Description: A tall shrub, forming at times dense clumps. Leaves smooth, alternate, entire. Twigs slender. Spicy-aromatic. Fruit bright scarlet.

Propagation: Remove seed from pulp and plant in fall or bury in box of moist sand until spring. Prefers rich moist soil.

Desirable qualities: Attractive as an ornamental. Berries provide food for birds.

### HACKBERRY OR SUGARBERRY (*Celtis occidentalis*)

Description: Usually a small or medium-sized tree. Trunk is roughened by warty projections. The leaves are alternate, simple, lop-sided at the base and rough to the touch. The dark purple, berry-like fruit has a sweet but thin flesh and large stone.

Propagation: The seed should be planted in the late fall. Plant 2 inch deep in rich, well-drained soil. Grows best on slopes.

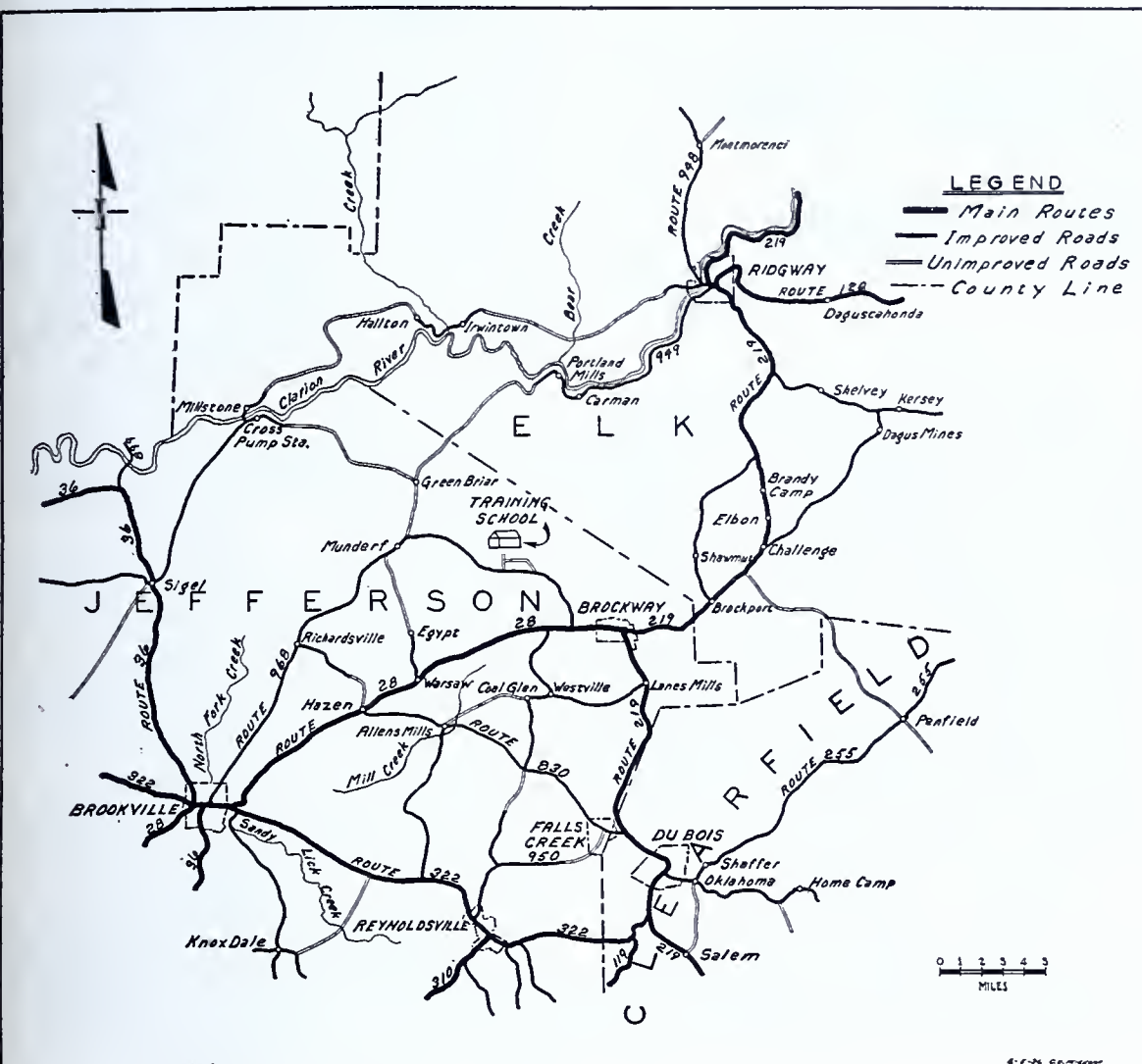
Desirable qualities: Fruit persists into winter, furnish food for birds. Has considerable value as an ornamental tree.

## ESTABLISH SMALL WATER-FOWL REFUGES

There are any number of costal marshes, lakes, rivers, ponds and sloughs that already are available. Almost any of them can be developed and made into attractive refuges. Publicly-owned waters in parks or elsewhere are open to you. Use of private waters often can be had simply for the asking.



## Location Game Commission Training School



The Game Commission Training School is located about five miles northwest of a point on Pennsylvania Highway Route 28, between Brookville and Brockway; which point is sixteen miles northeast of Brookville and two miles northwest of Brockway, Jefferson County. A large Keystone sign, bearing the wording "Game Commission Training School—5 miles," will be observed along the northerly side of this highway. Follow this designated road for approximately five miles to the School.

The Training School facilities are inadequate to lodge and provide subsistence for relatives and friends of student officers and other guests, and the nearest town, Brockway, is approximately seven miles distant. Brookville is approximately twenty miles distant.

Visitors to the School should plan their trips accordingly. It is necessary to limit the visiting hours to Saturdays between 10:30 A. M. and 4:30 P. M., and on Sundays between 9:30 A. M. and 4:00 P. M.

### GAME LANDS EXTENDED

(Continued from page 22)

come a part of State Game Lands No. 108.

Two offers are pending in Bedford County, one of 62 acres in Snake Spring Township, and one of 400 acres in Monroe Township, the latter adjoining State Game Lands No. 97, which is all excellent turkey country.

67 acres of good farm land have been offered in Cherry Township, Sullivan County. It adjoins State Game Lands No. 66.

Eight offers totalling 836 acres are being investigated in Mercer County, Sandy Lake Township, and if the titles are clear, will be accepted They adjoin and

comprise the first blocks of land approved for purchase in Mercer County.

332 acres of farm and woodland, excellent ringneck pheasant territory, were offered in Middletown Township, Susquehanna County. This is a desirable tract and the Commission hopes to consummate the deal in the near future.

Another tract of 660 acres of woodland has been offered in Harmony Township, Susquehanna County, which, if approved, will connect up with State Game Lands No. 70. State Game Lands No. 35, also in Susquehanna County, will be rounded out by 200 acres purchased in New Milford and Great Bend Townships.

836 acres have been offered in Carbon

## BORES AND CHOKES OF THE AMERICAN SHOT GUN

(Continued from page 7)

down through the years rather than a mere means of securing the full bag limit. Then when you have reached the age when you can no longer hunt you can call in that splendid youth, your stalwart grandson, and say to him:

"My boy, I have just been taking another look at 'Old Betsy.' She is in better shape than I am, in fact she is just as good as ever, the barrels gleam just as brightly as they did when I bought her over fifty years ago. I guess I have taken better care of that gun than I have of myself, or it may be that a good gun will out-last a good man. It won't be long now until I depart for another land, and I am not sure that she can serve me over there, so I want to give her to you. I have been watching you for the past two or three years and I am convinced that you are a chip from the old block—you look pretty much as I did when Old Betsy was new. I want you to remember that when you are out with her, you are in the company of a personality that never had any part in the breaking of a single game law, and I know that you will be mighty careful to see that Old Betsy will never have cause to hang her head in shame."

## PENNSYLVANIA AND THE HAWK PROBLEM

(Continued from page 8)

of the hands of the State and gave it to the Federal Government, could be found.

Pennsylvania owes the responsibility to nearby states, that as a good neighbor it brings its laws into agreement with the findings of scientific research, and stop this foolish, wasteful slaughter of highly useful birds. Thousands of dollars have been spent to study this problem by both Pennsylvania and the Federal Government. The U. S. Biological Survey have examined over 5,000 hawk stomachs and in Circular #370, "Food Habits of Common Hawks" a clear picture is given of how we should regard each species.

Pennsylvania has examined over 2,500 stomachs in addition, and the results check most remarkably with those of the Biological Survey. With this final confirmation of the findings of the Federal Bureau of Biological Survey, by the examination of hawks actually taken in Pennsylvania, the facts concerning the value of most of the birds of prey can safely be said to be incontrovertible.

and Todd Townships in Huntingdon County, which, if purchased, will be a valuable addition to State Game Lands No. 67. A tract of 207 acres in Warriors Mark Township, also in Huntingdon County, was offered.





## ON THE FIRING LINE WITH TRAP AND SKEET

The Grand American Trap Shoot will be held at Vandalia, Ohio, August 24, 25, 26, 27, and 28. Messrs. S. M. Crothers, Walter S. Beaver, Charles Newcombe, J. I. Danna, George D. Baldwin, J. S. McDowell, J. I. Carson, M. D. Leitzel, W. A. Pearson, W. A. Patterson, Clarence Marshall, and John B. Eshleman, are some of the Pennsylvania marksmen who will attend.

The South End Gun Club, Reading, lost by one target to Wilmington, Delaware, at a recent shoot held over the former's grounds at Lorane. Walter Beaver, shooting with Reading and George D. Baldwin, with Wilmington, went through the program without a miss, 75 targets. Ninety shooters took part.

The Boyertown Rod and Gun Club held a very successful clay target match Sunday afternoon, May 24. Morris Leitzel and Joan Stoudt, both of Reading, were high in class A, 50 all; George Patterson, Quaker City Gun Club, was runner up with 49 and H. A. Trout, Boyertown, after two shoot offs went straight in the ties for 46. Here are the total scores—Rhodes, 45; Trout, 46; Bettinger, 47; Trexler, 43; Nester, 38; A. Gresh, 47; Irwin, 48; Matz, 47; Wagner, 46; Patterson, 49; Leesser, 46; E. Gresh, 44; Zettlemeyer, 48; Geyer, 42; Adams, 36; Dr. Steiff, 47; M. Leitzel, 50; Miss Fern Sreiff, 30; D. Heim, 47; Dr. High, 44; G. Neubling, 41; Lesnesski, 46; Snyder, 46; Wertz, 43; Joan Stoudt, 50; Quaintance, 43; Gansyler, 45; C. Dietrich, 47; Hemming, 45; Kellar, 44; Mrs. Hess, 41; H. Miller, 47; Adams, 47; Fred Hess, 46.

The South End Gun Club, Reading, is going to make a bid for the 1938 Pennsylvania State Shoot. It was held at this same club in 1934 and was a big success.

At a recent shoot over the Quaker City traps, Philadelphia, Morley McBrayne, West Chester, topped the list with 98x100.

The Yorklyn, Delaware classics, auspices of C. Clarence Marshall, taking place August 12, 13, 14, and 15 promises to have its usual large attendance. Yorklyn, Delaware, is only four miles from Kennett Square, Pennsylvania.

The Allegheny Mountain Skeet League was recently organized at Greensburg. C. E. Stenhauser, South Hills Sportsmen's Association, is president. The league comprises five clubs; Uniontown, Homestead, South Hills, Indiana, and Johnstown. A number of matches have already taken place. Other shoots scheduled are: July 11, Indiana at South Hills, Pittsburgh; July 12, Homestead at Uniontown; July 26, Uniontown at Homestead; South Hills at Indiana; August 9, Indiana at Uniontown; August 13, Johnstown at South Hills; August 22, South Hills at Johnstown; August 23, Uniontown at Indiana; Indiana at Homestead; September 19, Uniontown at Johnstown; September 20, Homestead at Indiana.

The Southern Chester County Chapter, Izaak Walton League, has leased the gun club grounds formerly occupied by the Kennett Square Rod and Gun Club and will announce some shooting dates soon.

Howard M. Nichols, President of the Quaker City Gun Club, won the high over all in one of the club's recent shoots, but not until he had to exert himself in a shootoff with J. W. Eshleman, the Lancaster crack shot. Each had 73 breaks in the handicap match. In the shoot off Nichols won, his score being 25 to 24.

The night shoots at Thorndale, Chester County, have proved very popular. The remaining night shoots take place July 16 and 30; August 6 and 27. Thorndale is on the Lincoln Highway, between Coatesville and Downingtown.

The Delaware State Shoot held over the Clarence Marshall traps at Yorklyn, Friday and Saturday, May 22 and 23, attracted many shooters. The marksmen of the States are looking forward to the blue ribbon classics on the Marshall grounds in August. Some of the best shots in the world participate at this event.

Oxford and Atglen, Chester County Clubs, have been having some fine turnouts. John Baldwin, Atglen, conducts the shoots for Atglen, and Dr. Frank Hanna, Oxford, for his club. Forty marksmen turned out for a recent shoot. Oxford won the match.



Q. Is it legal to hunt groundhogs (woodchucks), foxes, crows, and other vermin on Sunday?

A. There is nothing in the Game Laws to prohibit such hunting on Sundays, if the hunter possesses the proper license and displays the tag. However, no Sunday hunting is advisable, for several reasons: The discharge of firearms on Sunday may be a violation of the Blue Laws; and, Sunday hunting of game birds and animals is unlawful.

Q. Is it legal to dig out groundhogs?

A. Yes. But by all means obtain consent of the landowner before doing so.

Q. How can I carry a pistol for hunting purposes?

A. Go to your County Treasurer, show him your hunter's license for the current year, and he will issue the required permit for a fee of 15c.

Q. Does the above-mentioned permit allow me to carry a pistol for training dogs on small game, in season?

A. Yes.

Q. How many protected hawks have we in Pennsylvania?

A. Two. The Osprey or fish hawk, and the sparrow hawk.

Q. If you get a permit to carry a pistol which is good for the year 1936 and is issued with the fishing license number on the permit, can you use it to hunt with as long as you carry your hunting and fishing license both in full view?

A. Section 6 of the Uniform Firearms Act of 1931, under which special permits to carry pistols for hunting, fishing and training dogs in season reads as follows:

"The registration of a firearm, as herein provided, shall be good only for the year for which the hunting or fishing, in connection with which it is granted, is issued."

In our opinion, if you have registered the pistol under a 1936 fishing license, you can, under the provisions of the Act above mentioned, use that pistol for hunting, fishing or training dogs in season, during the period covered by your permit.

We are not familiar with the form of certificate used, but if your permit has an expiration date, you would not be permitted to use it for hunting, fishing or training dogs beyond the date it expires. The fact that it was issued under a fishing license does not, in our opinion, prohibit you from using it for hunting purposes during the period covered by the registration.

Mike Kelly with 96x100 was high gun at the dedication of the Northeastern Trap Shooting Association, near Scranton, recently. S. Jagger, Dingman's Ferry, was runner up, 93x100; S. A. Smith, 92; G. Dorsey, 88; T. H. Webb, 85.



PENNSYLVANIA  
 BOARD OF GAME COMMISSIONERS  
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# STATE GAME LANDS NO. 38.

MONROE COUNTY  
 POCONO, JACKSON, CHESTNUT HILL AND  
 TUNKHANNOCK TOWNSHIPS



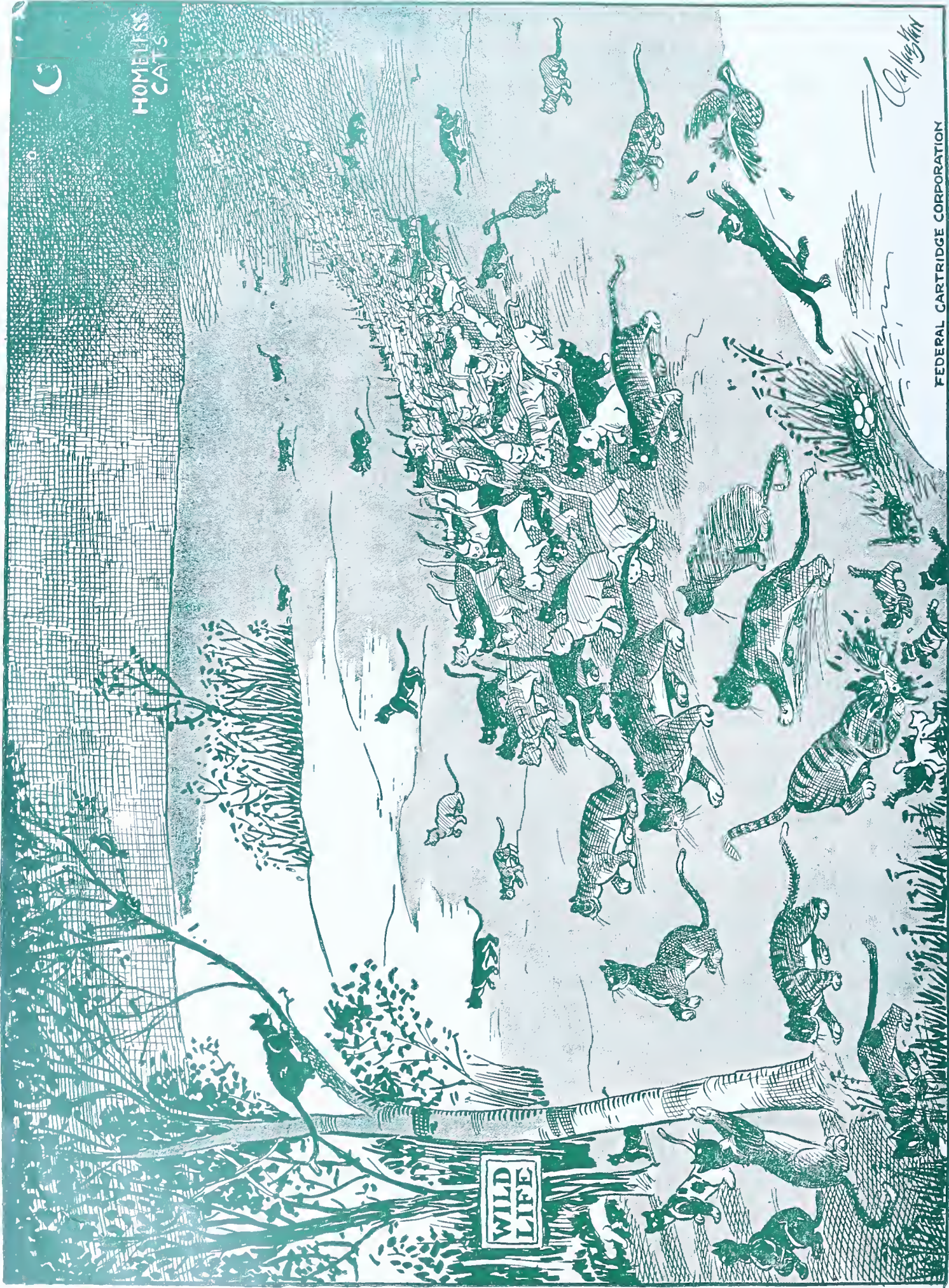
**LEGEND**

- High road
- Boundary line
- Stream
- Spring
- Church
- Fence





HOMELSS  
CATS



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AUGUST  
1938



PENNSYLVANIA  
GAME NEWS

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# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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# • EDITORIAL •

VOLUME VII

AUGUST, 1936

NUMBER 5

## COMMISSION RECOGNIZES MERIT

A complete reclassification of all its field personnel marks the final step in the reorganization program inaugurated by the Board early in the year. In the future the Commission will fully recognize meritorious services, and all officers who fail to merit authorized advancement for two successive years are to be cited before a newly created Trial Board for dismissal.

The new set-up places the field administrative staff of the Game Commission on much the same basis as the State Police.

Advancement on the Staff in the future will depend entirely upon the efforts and demonstrated efficiency of each individual officer, and it is sincerely believed that the new plan will assure top-notch efficiency.

Early in the year the Commission set up a school to train field workers, and 35 young men are now in training at the Commission's School north of Brookville, Jefferson County. The Commission also reassigned all of its supervisory officers, and transferred a number of other officers to new posts in order to strengthen its field operations. A goodly number of officers are now available for special "undercover work" throughout the State, and those who have been wilfully violating the Game Laws will surely be apprehended if they continue their practices of former years.

## FIRST COOPERATIVE PROJECT READY

Pennsylvania's first Cooperative Farm Game Refuge Project is about to be realized, the agreements having been executed on the part of the farm owners and the Board of Game Commissioners. This project comprises ten farms located in Chester

County, aggregating 1,507 acres. More acreage will no doubt be added later. The refuge will consist of 12 small subdivisions, comprising about 200 acres.

The 12 refuge subdivisions, wherein no hunting will be permitted, will be marked and posted in the near future, and large mesh woven wire fencing will be constructed around areas where this is agreeable to the farm owners concerned. Red and white metal posters, customarily used for Auxiliary Refuges, will be used, and Safety Zone posters will be posted around the buildings.

## CLUB RATES FOR GAME NEWS

Sportsmen's organizations will welcome the Commission's recent decision to offer club rates for the GAME NEWS. This action was prompted by many requests for a special fee, and the Board is convinced it will be the means of enabling more clubs to adopt the News officially.

The club rate, which will be *forty cents* a year, will apply to organizations having twenty-five or more subscribers, provided the club officers send us subscriptions in bulk.

Under the club rate plan, practically all organizations will be able to operate without too seriously affecting their financial status. It is believed, also, that the inclusion of the magazine as part of the club dues will help considerably in increasing membership.

If every member of a sportsmen's association was a reader of the NEWS, the association itself would greatly benefit. It would have within its body a group of men who were constantly posted on the conservation problems of the State, as well as the activities of other clubs.





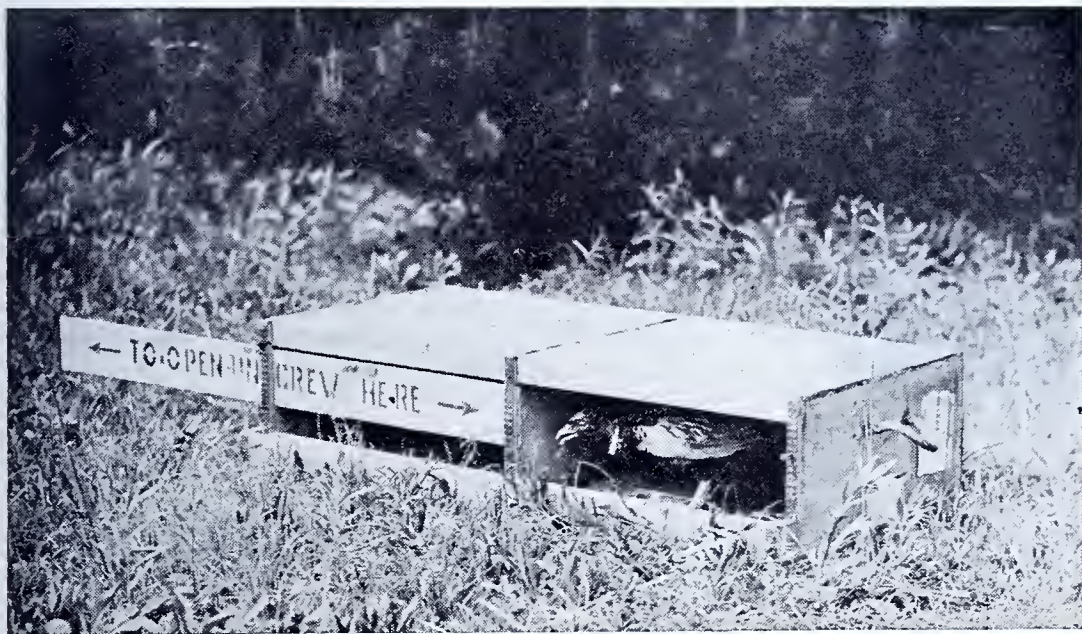
Reproduction of the splendid etching by Richard E. Bishop, sportsman and artist of Mt. Airy, Pa., which will adorn the new Duck Stamp for 1936.



# Progress on the State Game Farms

*Game Bird Propagation Program Surpassed Notwithstanding Severe Drought Conditions—Sportsmen's Interest Keen*

By Charles W. Wessell



From Game Farms to the Coverts

AS THIS is being written the four State Game Farms are rounding into the home stretch of the 1936 game bird propagation program. In the face of severe drought conditions, which have attended the greater part of the breeding season, burning the brooder and rearing field cover and "killing out" what would have been excellent cover, the game bird rearing program has nevertheless gone forward with gains all along the line.

At this writing a total of 51,365 game birds have been incubated and sent to the brooders at the four State Farms during the current season. The greater portion of these birds were, of course, Ringneck Pheasants, but the figure includes Bobwhite Quail, Wild Turkeys, Hungarian Partridges, Mongolian Pheasants, Ruffed Grouse and Chukar Partridges.

## Ahead of Program

The game farm production to date is well in advance of the Game Commission's 1936 program, calling for 25,000 Ringneck Pheasants to be produced at the State Farms, of which 12,500 cock birds are to be raised to maturity for Spring liberation. This cock bird program, though representing an increase of 5800 birds over the number available for release last Spring, can at present production rate and under normal weather conditions be surpassed by several thousand birds. At this time there are upwards of 16,000 young Ringneck and Mongolian cock birds in the holding fields at the several farms. This figure is in addition to several hundred young male birds required for breeding purposes.

## Mortality Record Lowered

Shipments of young hen pheasants from the age of nine weeks upwards have been started to sportsmen's organizations having facilities for further rearing the birds, and to various refuges and other suitable protected areas throughout the State. All hen birds, not shipped for further rearing, are well developed, full-winged birds.

At this writing, the total Ringneck Pheasant mortality at the State Farms has been reduced from 7.2%, suffered

up to this period last season, to 5.7%. Bobwhite Quail mortality maintains the extreme low of 6.4%. Mongolian Pheasant losses were reduced to 5.8% from 10.3% in 1935, and Wild Turkey mortality has been lowered from 7.7% to 4.9%.

## More "Huns" and Grouse

Results to date in connection with experimental propagation activities with Hungarian Partridges and Ruffed Grouse have been most encouraging. Never losing sight of the fact that anything can happen to experimental efforts in game bird propagation,

there are nevertheless over 700 young "Huns" now at the farms, representing some 250 more than last year.

A total of 133 Ruffed Grouse have been sent to the brooders compared with only 29 in 1935. Though there are many difficulties still to be surmounted in accomplishing successful artificial propagation of this great bird, the grouse mortality to date has been reduced 15% below last season.

Experimental propagation on a limited scale has been carried on with the Chukar Partridge with excellent early results. Sixty-three of these birds were sent to the brooders with a loss of only three.

## Wild Turkey Propagation

Under the Commission's policy, designed to improve the quality and inherent wildness of the birds raised at the State's Wild Turkey Farm, the propagation of Turkeys this year has been featured by an increased infusion of wild blood. This has been accomplished, in great measure, through the establishment of Wild Turkey propagating refuges where a limited number of eggs, fertilized by wild gobblers, were made available to the State Farm. A number of outstanding specimens of Wild Turkey breeders, obtained at the start of the breeding season, have also influenced the quality of the young turkey poults comprising this season's production at the farm.

To date, 3090 Wild Turkeys have been sent to the brooders with a loss of only 154.

## Holding More Bobwhite Quail

Bobwhite Quail hatches at the State Farm have been running at high percentage during the current season. Shipments of well developed, full-winged youngsters have been started to Farm Game Refuges and to other desirable areas throughout the State.

(Continued on page 9)





# The American Pheasant\*

*A complete history of this popular game bird*



The little Llewellyn snapped into a staunch point.

By SETH GORDON

**E**ARLY attempts to introduce pheasants in the East, birds shipped from England, date back to 1790. Richard Bache, son-in-law of Benjamin Franklin, brought them to his Delaware River estate in New Jersey, probably mostly for aviary purposes. A century later, according to Dr. John C. Phillips in his *Wild Birds Introduced in North America* (1928), Pierre Lorillard imported many pheasants into northern New Jersey to stock his estate, and early in the nineties pheasants were well established in that region.

But, according to the same author, "not much attention was paid to foreign game birds until after the successful introduction of pheasants in Oregon. After this became known in the East the country went wild over pheasants, without much regard to the actual stock. The nineties saw pheasants more or less established in many parts of the Northeastern States. Palmer says they had been placed in all the states except nine by 1907, and of these five were in the South."

Between 1906 and 1915 something like 80,000 pheasants were imported for brood stock and releasing, but, as Doctor Phillips says, too many of the states, largely to satisfy political demands, at first sent a few pairs to each county, never enough in one place to furnish a conclusive experiment.

## Artificial Rearing Gains Impetus

Rearing pheasants for stocking purposes in America was given great impetus when, in 1912, the American Game Association established demonstration game farms and published a special bulletin on pheasant rearing. Many state and private game farms were established, mostly to raise pheasants, but in the beginning thousands of birds were utterly wasted by being stocked in forest country, when their natural habitat is grain-farming country interspersed with plenty of dense weed, tall grass, brier, swampy slough and alder patches.

No one ever attempted to give a scientific reason for the failure of most of these widely scattered releases, except that there just weren't enough birds to assure success, until at the 20th Game Conference Dr. A. A. Aleen of Cornell University, in discussing sex rhythm, gave an explanation that may be the answer. He said: "If a species is rare, territories large, competition not severe, a lack of synchronized breeding rhythm and resulting infertile eggs is likely to occur. Final extirpation of species on the verge of extinction, such as the heath hen and the passenger pigeon, might well have been accomplished because of a lack of synchronization in the mating cycles of the few males and females left. The failure of introductions of foreign species when few individuals are liberated or the stock widely scattered is likewise explainable on this same basis."

## Ringnecks Crafty Game Birds

American shooters for years argued that ringnecks would never stand up under punishment. Many of them still belittle this gaudy, wily foreigner. They say he isn't game; that he's a dunghill. But I'll wager my best Llewellyn setter that they never hunted pheasants where the birds really thrive and are hunted regularly.

The worst they can say about the ringneck is that he runs ahead of bird dogs; but as to gameness, he can take it. Today he is one of the craftiest game birds in America, and he thrives in the very country where native birds, such as prairie chickens, sharptails and quail, have been driven out by intensive agricultural methods.

Pheasants and farming get along together, if the farmers give them half a chance. And when the hunting season opens, the cocks soon get it through their heads that the report of the shotgun means no good to them. They either sit so tight that one must almost step upon them—and

I have stepped on a few—or they sneakdog.

out or flush wild with their typical cackle of alarm.

Pennsylvania's game officials have been credited with being smart men, but the wily ringneck outsmarted them. No state hunts its farm game coverts harder. The state authorities, even as late as 1919, held that "pheasants will never become established in Pennsylvania because they cannot stand hard winters and hard hunting both." They argued that the only sensible way was to stock pheasants in the springtime, shoot them off in the fall, then repeat the operation.

That state began stocking pheasants in 1915—2,100 of them—and shooting of both sexes was allowed the same fall. Later, hens were protected. So far, Pennsylvania has stocked over 200,000 birds and distributed over 600,000 eggs. Her average annual pheasant kill now greatly exceeds the kill of native ruffed grouse, and pheasant hunting has become so popular that it has taken much of the load off the native game birds.

Every other state where the ringneck has taken hold reports the same thing. I have hunted pheasants in a number of states, including South Dakota, and they can still outwit me aplenty.

## Can Carry Lots of Lead

And can the pheasant carry off a lot of lead! Several years ago I knocked a big cock for a loop with a heavy load of 6's in a thick Illinois cornfield. He fell like a plummet. I knew just where he lay.

"Go fetch, Patsy!" I commanded.

Out went the little bitch like a flash. She knew her pheasants, and that bird to me was just as good as in my coat right then.

But Patsy failed me. Finally we hunted that spot together in widening circles for forty minutes, but no pheasant, except two scared hens. Disgusted, I called it quits.

Almost an hour later I swung back into that section, hoping the rascal might still be found. Over two hundred yards from the marked spot the little Llewellyn snapped into a staunch point. I walked in, but no bird flushed. Finally, about five feet ahead of her nose, I spied the tip of his tail feathers, his body completely hidden under thick grass. Desiring to give him a chance, I shoved my foot right over him. Nothing doing. Then I grabbed, and picked up my bird—one wing off, the opposite leg dragging, and otherwise hit hard, but still game and fighting for freedom. Right then I vowed never to hunt pheasants without a

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Other pheasant hunters have had many similar experiences. Last fall a companion, a considerable distance from me, knocked a high-flying cock right out of the air over a nursery planted to small evergreens. Ground cover was sparse. I marked the spot, stood still, and watched.

Apparently the pheasant was stone-dead when he fell. Two friends hunted, with the help of a dog, until disgusted. Then I joined them. After thirty or more minutes we gave up. Evidently that bird was only stunned or had a broken wing, and used his strong legs to streak out unnoticed.

I have often seen pheasant hunters fail to bag birds because they hunted and re-hunted fields or swales of heavy cover only, and did not hunt to the very edges. Or they overlooked the adjacent sparse stubbles, open ditches and little islands of cover near by.

On the same trip last fall I persuaded my friends to accompany me on two different forays into a little patch of briers, weeds and grass along a steep bank, less than a tenth of an acre, a considerable distance from the cover we had been combing hard without results. Each time we flushed cocks, one time three. One companion dropped a high-climbing Chink right over a bare field and shouted, "He's mine!" I rushed up the steep bank just in time to

see that bird running back into the brier patch. Had it not been for my action, that friend would have lost another "dead" cock.

Nowhere in America has the ring-necked pheasant made more remarkable increases than in the Middle West. Ohio and Indiana did not give the pheasant much attention until comparatively recent years, but Illinois, Iowa, Michigan, Wisconsin, Minnesota, Nebraska and South Dakota all began stocking pheasants on a considerable scale along about 1912 to 1917.

The premier pheasant state of the Union today is South Dakota. The first public stocking there occurred in 1912, with 300 birds. The total number stocked up to 1919 was 7,000. The first open season was 1919. The total kill of pheasants in South Dakota is now estimated at 1,000,000 to 1,500,000 birds annually. Something like 23,000 birds have since been trapped from sections where they were abundant and shipped to other sections of the state.

The eastern part of South Dakota seems to be the ideal pheasant habitat. That section is covered with vast cornfields, from which the corn is husked from the stalks, leaving the fodder and the corn missed in harvesting in the fields for winter cover and food. Adjacent to the cornfields are large swamps and sloughs covered with heavy grass and reeds of the kind which pheasants crave for added shelter and roost-

ing cover. Predators, except crows, seem to be scarce in that state.

While the neighboring states stocked pheasants, several of them have benefited greatly from South Dakota's overflow. Parts of Nebraska, Iowa, Minnesota and North Dakota, with equally favorable food and cover conditions, are now almost as heavily stocked with pheasants as eastern South Dakota.

North Dakota has trapped and transferred a considerable number of pheasants to stock sections not heavily populated, and so far has trapped and shipped many pheasants to the provinces of Saskatchewan and Manitoba for an equal number of Hungarian partridges.

Nebraska began stocking pheasants in 1920, the total stocking consisting of 500 pairs, but many pairs of birds have since been trapped and transferred to other sections.

In Wisconsin, Gustave Pabst was the good angel to the sportsmen. He stocked 2,500 pheasants in 1910, and later the state began rearing and stocking them on a considerable scale.

Wisconsin's first open season was declared in 1925; last year the estimated kill was 150,000 pheasants.

The Prairie States were formerly the great prairie-chicken country of North

*(Continued on page 28)*



The author with a pair of Pennsylvania cock Pheasants.





Deer in experimental breeding area

# Sex Ratio of Whitetail Deer Progeny

*The Following Article Consists of Some Very Enlightening Notes on the Sex Ratio of the Progeny of Whitetail Deer*

**By Richard Gerstell**

**I**F the various species of deer are to be successfully managed in Pennsylvania, or throughout any other part of their range, one item is of vital significance, namely, to determine that point of maintenance where the sex ratio of the herd as a whole will tend to hold the animals in the best possible physical condition.

The whitetail deer of Pennsylvania, New York, Michigan and certain other states have within the last fifteen years been greatly increased in numbers, chiefly through the enactment of legislation which has allowed the gunners to shoot only the adult males of the species. Due to such legal restriction, there have been developed within the herds, simultaneously with the increase in size, heavily unbalanced sex ratios. At best, it is possible only to estimate very roughly the ratios which may actually exist.

Since it is desirable to keep the deer herds in excellent physical condition, sound management programs should be directed not merely to keep the sex ratio within certain limits, but even to hold it at a point judged to be ideal.

Probably that ideal would best be represented by the sex ratio of the progeny at birth of a large herd of deer which had for a number of years existed under primitive conditions beyond the reach of all influences of present-day civilization.

The fact that no such herd now exists was clearly recognized, but the writer felt that a very close approximation of the figure sought for would be found in the sex ratio of the progeny of the Pennsylvania deer herd at the time of birth. Accordingly, research work designed to determine the last mentioned ratio was undertaken.

The results obtained from the work were surprising. The sex ratio of the 1935 Pennsylvania fawn crop was, it is believed, quite accurately determined. It was discovered, however, that the ratio in question was not only



far from that which was expected, but also the figures seem to indicate that the ratio varies according to the influences brought to bear by certain ecological factors which directly effect the physical condition of those individuals which make up the deer herd.

For the past few years, the Pennsylvania Game Commission has annually raised, from the age of two or three days to maturity, approximately fifty fawn deer by feeding them cows' milk from bottles. The animals in question came from all parts of the Commonwealth where they were picked up soon after birth, and while still too young to run either rapidly or far, by persons who did not see the timid does hiding in the nearby cover and believed the fawns to be orphans.

A record of the sexes of the fawns so taken from the woods and raised at the various State Game Refuges show that in some years the females greatly outnumbered the males, that in other years the proportion of males was equally excessive, and that in still other years the sex ratio of the "orphans" was very nearly equal. The figures covering a period of five years show that the sex ratio of the total number of animals under consideration was approximately one to one.

It was realized that the number of fawns "bottle raised" each year was too small to give a true picture of the sex ratio of the progeny of the Pennsylvania deer herd as a whole, but the figures obtained over a period of years, together with field observations, led the writer to believe that the ratio in question was probably very nearly one to one with a slight excess in favor of the females.

During the past ten years there have been in the State



of Pennsylvania a number of late fall shooting seasons wherein it was legal to kill fawns born during the summer of those same years in which such open seasons were allowed. It is most unfortunate that a record of the age and sex of all deer killed during these antlerless seasons was not kept and made available.

On December 12, 13 and 14, 1935, licensed hunters of the State of Pennsylvania were legally allowed to kill antlerless deer, irrespective of size or sex, in 14 of the 67 counties of the Commonwealth. The area embraced by those 14 counties includes something over one-third of all those lands in the State which may truly be classed as deer territory.

Every person who killed an antlerless deer during the 1935 special open season was required by law to report to the Harrisburg Office of the Game Commission the animal so killed. The reports, made in writing, were to contain the name and address of the person killing the deer, the sex and weight of the individual, the name of the district where killed, and certain other specific information.

The District Game Protectors of those counties open to the killing of antlerless deer reported shortly after the close of the antlerless season that they estimated that the hunters had legally shot 46,668 antlerless deer in addition to those legal bucks killed during the regular season extending from December 2d to the 11th. By January 15th, approximately 41,000 antlerless deer killed reports had been received at the Game Commission's office in Harrisburg.

Due to certain difficulties encountered in attempting to see that all hunters were supplied with a printed form on which to report the killing of antlerless deer, and because many persons were ignorant of the fact that they were required by law to report all deer shot during the special season, it is known that the reports received did not represent the total number of antlerless deer legally killed and it is believed that the figure in question very closely approximates 45,000. It is significant to note in this case how closely the estimated kill as reported by the Game Protectors checked with the written reports filed by the hunters.

Of all the written deer killed reports which were received, 32,771 were upon receipt *complete in every detail*. In other words, in all such cases, the Commission had on file the name and address of the person killing the antlerless deer, the number of the hunting license issued to that person, the name of the general location in which the animal was shot, together with the name of the county in which the same is situated, the date the deer was killed, the sex of the animal and an estimate of its weight.

Chiefly by means of the estimated weight and sex statements given, it was possible to determine many important facts relative to the deer killed.

Since the writer spent a great part of the 1935 open deer season in the field weighing and measuring deer shot by gunners, he was able to gain not only a fairly comprehensive idea of the weights of deer representative of the different sex and age classes, but also a sound approximation of the average hunter's tendency to over-estimate the weight of deer killed in the woods.

Knowing that by mid-December individual fawns found in the Pennsylvania deer herd weigh from 18 to 78 pounds



Game officials examining and weighing deer

with an approximate average of 55 pounds live weight, and taking into consideration the hunters' general tendency toward the over-estimation of such weights, it was felt that if the reported deer kills were divided into two groups, the first consisting of individuals estimated to weigh 85 pounds and under, and the second containing individuals estimated to weigh 86 pounds and over, those two groups would represent in the first case those animals which were 1935 fawns and in the second case those animals which were born prior to 1935. In other words, the antlerless deer kill would be divided into two groups, one containing chiefly 1935 fawns and the other consist-

(Continued on page 8)



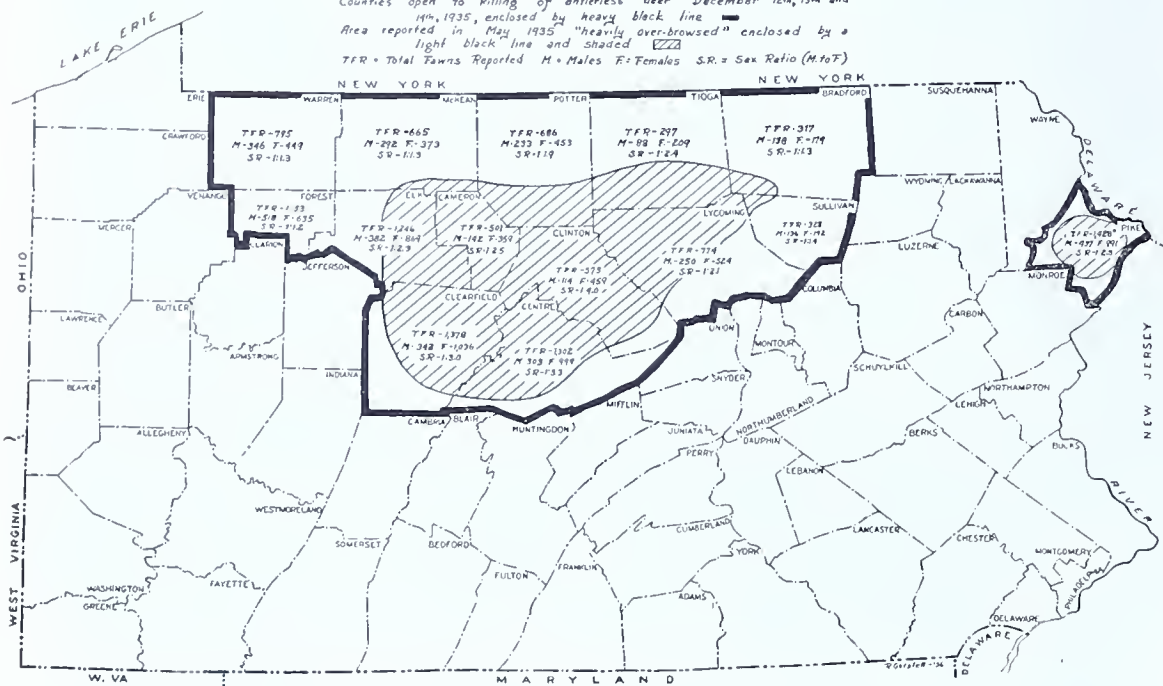
The author weighing a Centre County specimen



DISTRIBUTION OF REPORTED FAWN KILLS SEASON OF 1935

Legend:

Countries open to killing of antlerless deer December 12th, 1934 and 14th, 1935, enclosed by heavy black line. Area reported in May 1935 "heavily over-browsed" enclosed by a light black line and shaded. TFR = Total Fawns Reported M = Males F = Females S.R. = Sex Ratio (M to F)



A total of 11,443 reported fawn kills are shown on map. Of the total, 3,721 are males and 7,722 females, giving an average sex ratio (males to females) of 1:2.0

ing of all other animals including mature does, yearling does and a very limited number of bucks which had shed their antlers.

It is known that some hunters may have estimated that certain of the larger 1935 fawns weighed 86 pounds or more and, consequently, a few of the fawns may have been thrown into that group supposedly containing only adult individuals. At the same time, however, a number of other hunters who had killed yearling does which weighed approximately 80 pounds undoubtedly estimated their weight at such and, accordingly, there was thrown into the fawn group a number of adult individuals. In these instances, each error balances the other and it is, therefore, felt that the number of animals herein listed as fawns is 97%, or better, correct. The same percentage likewise holds true for the adult figures.

A table showing the reported kill of 32,771 antlerless deer is presented herewith. Examination of this table will bring to light a number of interesting points.

First of all, proceeding under the classifications just mentioned, the deer reported to weigh 86 pounds and over are listed as mature individuals, and those reported to weigh 85 pounds or less are shown as 1935 fawns. The table indicates that a total of 21,328 mature individuals were killed, while only 11,443 fawns were reported. In other words, for every fawn killed there were approximately two mature individuals taken. If the figures for each county are examined, it will be found that this two-to-one figure holds relatively true not only for the total number of animals reported, but also for the number reported from each of the 14 counties where antlerless deer were shot in 1935.

Further, it is significant to note that out of the 21,328 mature individuals, only 2,543 were males while the remainder were females. Roughly speaking, therefore, only one out of every nine adult deer killed was a buck with shed antlers.

Next, we come to that highly important discovery which resulted from detailed study of the sex ratio of the reported fawn kills. Since almost without exception every person who shoots a fawn does so without regard for sex, because it is practically impossible to determine the same as the animal runs in the woods, the fawns taken by hunters are random kills not influenced by sex determination. It would, therefore, appear that the sex ratio of such individuals should, when a sufficiently large number of kills are considered, give a very true picture of the sex ratio of the fawn crop as a whole.

Of the 11,443 reported fawn kills, it will be noted that 3,721 were males while 7,222 were females. In other words, approximately two females were killed for every male. This fact would indicate that the sex ratio of the fawn crop produced in 1935 on an area representing over one-third of the entire Pennsylvania deer range was approximately one male to two females. Although entirely within the realm of possibility, the figure just given undoubtedly will prove quite surprising to many readers.

A study of the fawn figures for individual counties will show that in one county there were killed approximately four females to every male, while in another county there were approximately only 1.2 females killed to every male and that figures for additional counties lie at numerous points between the two extremes just mentioned.

At this point it becomes advisable to study carefully the map herewith presented and to enter into a discussion of several points involved in the history of the restoration of the Pennsylvania deer herd.

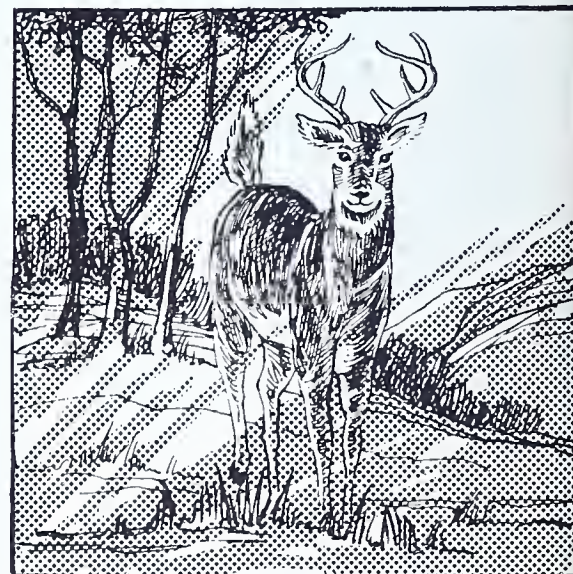
Since 1923, certain parts of the Pennsylvania deer range have been subjected to over-browsing by excessive deer populations. Following a study made during the spring of 1935, the writer at that time reported that over a large area, embracing almost all of Cameron, Clinton, Cen-

tre and Clearfield Counties, together with the western half of Lycoming County, the eastern-half of Elk County, the southern-halves of Potter and Tioga Counties and small portions of the counties of McKean and Bradford, and also the greatest percentage of Pike County, were heavily over-browsed by deer. (The area in question is shaded on the attached map.) Also, it was reported that the best deer conditions then extant were to be found in the counties of Warren, Forest and Sullivan, where extensive lumber operations were carried on at a later date than in other parts of the deer range.

It has been noted that the average sex ratio for all fawns killed during the 1935 antlerless deer season was 1 male to 2.0 females, and when county figures are examined it will be seen that 8 of the 14 counties under consideration show fawn sex ratios above the average, ranging from 1:4.0 in the case of Clinton County to 1:2.1 in Lycoming County, and that six counties show sex ratios below the average, ranging from Potter County with a figure of 1:1.9 to Forest County showing a 1:1.2 ratio. Careful study of the map will reveal the fact that all those counties showing sex ratios above the average lie wholly or in part within that area reported in March 1935 to be heavily over-browsed. Also, it will be noted that, with the exception of Potter County, which lies only partially within the over-browsed zone and shows a ratio of 1:1.9, and the counties of Bradford and McKean, only very small portions of which were reported heavily over-browsed, those counties showing sex ratios below the average lie outside the territory reported to be extensively over-browsed.

As a generality, therefore, it is possible to say that the fawn crop produced on the over-browsed portion of the Pennsylvania deer range showed a sex ratio wherein the female individuals outnumbered the male individuals by more than 2 to 1, while on the less heavily browsed portions of the range, the ratio never equaled or exceeded a 2 to 1 ratio in favor of the females.

This discovery is of particular interest because it indicates that there is possibly some very close connection between food conditions and sex determination. Apparently, the relationship acts as a direct







proportionate. During the winter of 1934-5, browsing conditions were generally considered poorer in Clinton County than in any other section of the State and hundreds of deer are known to have died from malnutrition in that county during the period in question. Also, the sex ratio figures presented in the table heretofore referred to show that the sex ratio of the 1935 fawn crop was most grossly out of balance in the county last mentioned. Likewise, food conditions in the counties of Centre, Clearfield and Cameron were also known to have been very bad during the winter of 1934-5 and these counties too show highly unbalanced sex ratios in the 1935 fawn crop. On the other hand, the counties of Bradford, Warren and Forest were not during the winter of 1934-35 subjected to heavy over-browsing and examination of the table reveals the fact that these counties show for the 1935 fawn crop the most nearly balanced sex ratios. Thus, it seems that the poorer the food conditions, the greater the tendency toward the production of females.

To the writer, the validity of the figures herein presented does not appear open to question, since they deal with thousands of individuals taken from an area of over 7,800,000 acres. Also, analysis of over 4,475 additional antlerless deer killed reports, which were originally received incomplete in one or more detail and which were returned to the sender for completion and finally came back to the Commission offices, shows ratios and proportions surprisingly similar to those already discussed. In addition, the statistics relating to fawns found dead during the winter of 1935 and 1936 give like ratios. A detailed explanation of the mechanism of the phenomenon just discussed would be of particular interest and value, but until controlled experimentation has thrown more light on the problem, it is impossible to offer any such explication. In view of this fact, a series of combination feeding and breeding experiments have been entered upon and it is hoped that the results obtained therefrom, together with additional detailed research in this field, will eventually give the answer desired.

## Progress On the State Game Farms

(Continued from page 3)

Over 7000 "Bobs" have so far been sent to the brooders and this fine little game bird is included in the Commission's plans for holding more adult birds for Spring restocking. By utilizing all available Quail rearing equipment at the termination of the brooding season, the Commission has arranged to hold, for Spring liberation, several thousand more Quail than was possible during the past season, without the necessity for the construction of additional holding pens. Arrangements are under way for the conversion of this rearing equipment, through inexpensive, detachable units, into holding pens for carrying over increased numbers of Quail. These birds, being well protected from the many Winter and early Spring hazards, will enter the coverts in prime condition for natural propagation in the wild state.

### Sportsmen's Interest Keen

Applications for Ringneck Pheasant hatching eggs and day-old chicks from sportsmen reached a new peak this year. Nearly 33,000 day-old chicks have been shipped to sportsmen from the State Farms; an increase of 9,000 over 1935.

While applications were received for many more, the farms shipped 47,889 Ringneck Pheasant hatching eggs to sportsmen during the current season.

Appreciating the keen interest shown by Pennsylvania sportsmen in game bird propagation, the Division of Propagation and Game Farms has in the process of development a sportsmen's brooding and rearing coop with which many exacting experiments are being carried on this season. Through these experiments, it is hoped that an inexpensive, easily operated propagating unit of this type, which can be recommended to sportsmen, may be developed. Such a unit, it is believed, will not only bring game

bird rearing within the limits of the average fellow's skill and pocketbook, but will greatly increase individual and group interest in this vital conservation activity.

Experiments with the sportsmen's brooding and rearing coop are being carried on under varying climatic conditions and with both oil and electric brooder units. These experiments will include the brooding of Ringneck Pheasants, Bobwhite Quail, Hungarian and Chukar Partridges, and California Valley Quail.

The progress on the several State Game Farms this year is most encouraging, and it is believed the sportsmen of the State will be interested in knowing where this phase of their work stands at this time. At the conclusion of the season we shall hope to present a final report that will be equally interesting and pleasing.



## Tabulation of 1935 Antlerless Deer Killed Reports

(INCLUDES ONLY REPORTS COMPLETE IN EVERY DETAIL)

County	Grand Total Antlerless	Adults		Total	Fawns		Fawn Sex Ratio (male Total to female)
		Male	Female		Male	Female	
Clinton .....	1,576	65	938	1,003	114	459	573 1:4.0
Centre .....	3,209	100	1,807	1,907	303	999	1,302 1:3.3
Clearfield .....	3,469	124	1,967	2,091	342	1,036	1,378 1:3.0
Cameron .....	1,584	86	997	1,083	142	359	501 1:2.5
Tioga .....	1,102	84	631	715	88	209	297 1:2.4
Elk .....	3,593	88	2,259	2,347	382	864	1,246 1:2.3
Pike .....	4,195	449	2,318	2,767	437	991	1,428 1:2.3
Lycoming .....	2,038	112	1,152	1,264	250	524	774 1:2.1
Potter .....	1,996	143	1,167	1,310	233	453	686 1:1.9
Sullivan .....	1,053	111	614	725	136	192	328 1:1.4
Bradford .....	1,061	113	631	744	138	179	317 1:1.3
Warren .....	2,303	144	1,364	1,508	346	449	795 1:1.3
McKean .....	1,991	133	1,193	1,326	292	373	665 1:1.3
Forest .....	3,691	782	1,756	2,538	518	635	1,153 1:1.2

Totals ..... 32,771 2,534 18,794 21,328 3,721 7,722 11,443

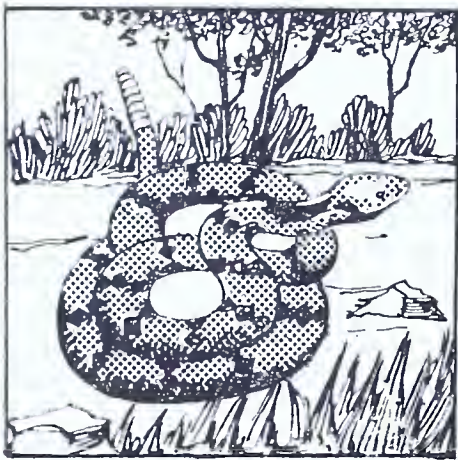
Of the total number of fawns reported, 32.5% were males and 67.5% were females showing that the sex ratio for the group as a whole was 1:2:0.



# Do They or Don't They?

*Facts and Fallacies of the Animal Kingdom*

By Leo A. Luttringer, Jr.



**D**O certain wild creatures do the things some people think they do or don't they? Usually they don't, but only those who have carefully observed the different forms of wild life, or who have read the works of prominent naturalists who have studied them, know for sure. It is about high time the people living in this modern day and age were shorn of their childhood beliefs and told the truth about these things.

I was amazed the other day when a good friend of mine, a highly intellectual individual, asked me whether it was true that there were hoop snakes which took their tails in their mouths and rolled after people. I was not only amazed but concerned, for my friend is a very prominent man within our community, and I hastened to assure him that the only hoop snakes I had ever heard of were the product of the imagination of those individuals who are always seeing pink elephants on the ceiling at night.

But my friends query was no more ridiculous than hundreds of others which are asked from day to day by equally important and intelligent individuals, and it is to put such persons on the right track that I set forth the facts as I know them.

Since I first mentioned snakes let me say that ignorance, mythology and superstition have combined to surround them with an atmosphere of dread. As a consequence there are no other groups of

animals concerning which there is so much fear and ignorance, and toward which there is so much cruelty almost uniformly shown in a relentless and unjust warfare. Snakes do not sting with their tongues. This belief probably arose from the Scriptural expression "stingeth like an adder." The tongue is the organ of touch, taste and perhaps even hearing and smell. Snakes do not charm birds, mammals or people.

The Horned-snake is another myth, and although it has formed the basis for many newspaper stories it has no truth. While there is a snake to which there is given the name of "The Horned Snake," it is quite harmless and there is no such reptile as the mythological creature with a poisoned horn in the end of its tail. Snakes do not throw or spit poison. The venom of poisonous species is ejected through fangs. Of 2,500 known species throughout the world 300 are poisonous. There are 15 species of rattlesnake in the United States. Other poisonous reptiles in the United States are the Copperhead, Coral and Water Moccasin.



Snakes are not slimy, nor are their bodies naturally moist, being covered with dry scales. One of the easily recognized differences between Lizards, which are Reptiles, and Salamanders, which are Amphibians, is that the latter are slimy and the former are not.

Snakes shed their skins two or three times a year. They are never blind during dog days as many people believe. Most snakes swim expertly. The poisonous snakes such as the copperhead and rattler have vertical eye pupils.

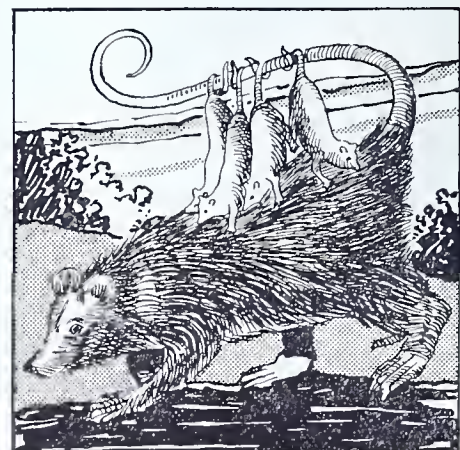
Among the myths must be classed the common belief that snakes milk or suck cows. This feat is not possible in my honest opinion. How common is the absurd belief that a snake's tail does not die until sundown or until it thunders! Snakes do not spring or jump from the ground at their victims nor do they strike from a truly coiled position. Part of the body is coiled but enough of the front is kept free to permit the natural zigzag or "S" position for striking.



Some people believe that if you kill a snake and turn it over it will bring rain, or that the reptile draws its own bead so that it is impossible to miss it or shoot it anywhere but in the head. Ridiculous! Some folks wear snake skins for rheumatism and stiffness and use their oil for consumption or other ills, baldness, (if it were only true), and deafness. The flesh is supposed to be good for blood disorders and some say a second bite of the same snake in the same place will cure or counteract the first bite.

Some snakes are supposed to swallow their young for protection, and although some reliable people have gone on record as having observed this unique protective instinct on the part of the garter snake, I think you will find that herpetologists, for the most part, scoff at the idea. Someone will make themselves world famous if they observe such an incident and have presence of mind enough to capture and tie a string around the head of the snake before the young are emitted.

It is true that some snakes "play possum" or feign death. It is also true that some poisonous snakes like the rattlers and copperheads and most species of garter snakes bring forth their young alive, whereas others lays eggs which are hatched in the sands. Fangs are replaced when broken off or extracted. Serpents often eat one another and can live a year or more without food. Two-





headed snakes are not uncommon. Most snakes are beneficial and even the poisonous varieties will not molest human beings unless for just cause.

A serpent literally walks on the ends of its ribs, which are jointed to the backbone, and as they extend down over each side of the body their ends are in connection with the ventral plates which have projecting edges at their rear margins. As these plates hold to the objects beneath the animal its body is brought forward upon the supporting and movable ribs.

Many fictitious stories have also been told about mammals, although most things said about them are true. However, we must not believe that the black bear or wild cat makes a habit of attacking people for they do not. Only when cornered or wounded, or in defense of their young, will these mammals molest human beings. Bears hibernate or sleep during the winter months at which time the young are born. They gorge themselves before holing up and subsist and nourish their cubs on their surplus fat until spring when natural food becomes available. During some periods of their hibernation their life energies are at their lowest ebb and border a state of coma.

Bear cubs are blind and nearly naked at birth and weigh only about a pound.

Both the raccoon and muskrat sometimes wash their food, after a fashion, before eating it. They do not always wash it, however, because much of it is secured far from water.

It is a common belief that porcupines throw their quills. This is another fallacy. The spines are not shot-out but adhere loosely to the porky's skin and when their barbed points come in contact with other material they are easily pulled out. Thus there is nothing true about the story of the porcupine that rolled beneath the apple tree and walked off with a peck of apples impaled on its spines.

It is true that the opossum hangs by its prehensile tail and feigns death or "plays possum" when frightened, and that the young hang from the mother's tail as she bends it over her back. The opossum is the only marsupial mammal on the North American continent and like the kangaroo of Australia has an external pouch in which the young are carried. When born baby opossums are so small that a litter of 18 may rest securely in a teaspoon. Such a whole litter weighs about one-fifteenth of an ounce. Two hundred and seventy living, breathing, digesting baby opossums would weigh one ounce. They are less developed than mouse babies and do not open their eyes during the seven or eight weeks they are in the pouch attached to the teats.

Skunks do not wet their tails and then flick the vile smelling fluid off. They are equipped with two scent glands, one on either side of the tail, and from these the "perfume" is ejected.

All mammals can swim, many of them expertly. Some swim only when forced. This year large numbers of squirrels swam the Delaware River, migrating due to food shortage. Reliable individuals, well known to the author, reported them



on several occasions. They do not consciously use their tails as sails while swimming as so many suppose.

It is true that deer and elk shed their antlers each year during winter and grow a new set before the following fall. Game protectors and hunters find many of these antlers, usually soon after they are dropped. Usually they are eaten by mice and other rodents. Fighting bucks will sometimes interlock their antlers and starve to death. Cases of this sort are not uncommon. Deer have been known to jump an eight-foot fence with ease and some of their leaps have exceeded forty feet.

Black bears climb trees, grizzlies do not. The so-called cinnamon bear is not a distinct species but a color phase of the black bear. The black squirrel also is a color phase of the gray squirrel.

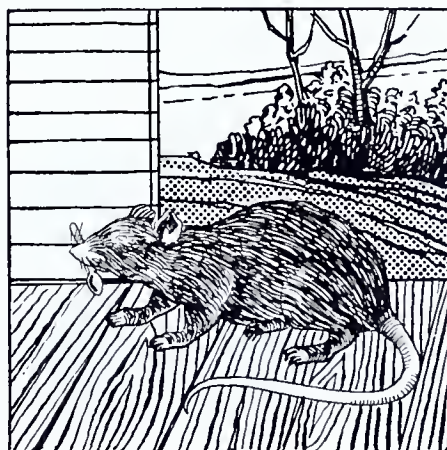
The deer has no gall bladder and no incisor teeth in the upper jaw.

It is true that the little wood rat loves to torment mankind by stealing objects of one sort or another about his cabins and lodges in the mountains. Often it takes knives, forks, spoons, slippers, tin cans, anything in fact, and hides them either in some other nook or cranny in the cabin or about its nest.

The flying squirrel does not fly, but it does glide or volplane, which is made possible by the loose strips of furry membrane which form both sides from ankle to wrist.

Bats are not carriers of disease parasites or bed bugs although some times insects which resemble the bed bug are found on their bodies. The common house rat often spreads disease.

The bat does not try to tangle itself in people's hair. This seldom happens and when it does it is merely a result of its



low flight. Bats are not blind as is often intimated by the expression "blind as a bat."

Beavers do not eat fish and therefore do not destroy the trout in their dams. Instead their dams furnish excellent feeding grounds and hatching places for fish and for waterfowl. The entrance to a beaver house is under water but the nest is above water. A beaver cannot remain under water more than nine minutes.

That beavers fell trees toward water probably is not true save that such trees happen to lean toward the water. They do not suck air out of logs to make them sink, neither do they use their tails as trowels or spades in erecting their house or dam. The tail is used principally as a rudder while swimming, as a prop while cutting down trees, or in slapping the water as a danger signal.

Gray foxes often climb trees when hard pressed by dogs.

It is true that some mammals, depending upon the life-zone in which they live, change their brown coats of summer to white ones of winter. In America this is true of most weasels and the varying hare or snow-shoe rabbit.

That the groundhog emerges from his winter's sleep on the second of February to see if the sun will cast his shadow is purely mythical. This myth implies that if he does see his shadow there will be six weeks more of cold weather, and if not, that day will be the beginning of warm weather.

The ways of Mother Nature are truly beyond our comprehension. Thus we often wonder just why the opossum is so closely related anatomically to the Kangaroo although in no manner shaped like his Australian cousin, and why the little jumping mice, which are in no way related to the kangaroo, look so much like him and have various of his characteristics.

I could possibly go on forever listing these do's and don'ts but time and space is valuable, therefore, I will bring this little narrative to a close with a few remarks about birds, and about animals which have been known to rear other animals.

According to records which are supposed to be absolutely authentic eagles have been known to carry off lambs, baby calves and in some instances children.

The Raven and crow have been taught to talk, and the former, particularly, is easily tamed. Like the wood rat, it has fondness for bright objects which it hides in out-of-the-way places.

The turkey vulture is said to be a carrier of the disease hog cholera but this is not true so far as I have been able to determine. No creature is worthy of more protection than this scavenger which rids our countryside of much carrion which humans have neglected to bury.

Some creatures, wild or domestic, often foster mother the young of other creatures. I know about and have photographs to illustrate the following cases, Cows, goats, and dogs to nurse and raise

(Continued on page 28)



# Sports of the Woods and Waters

*From an Early American History*

THE abundant supply of game in the forest and of fish in the waters was the supreme good fortune of the pioneer and his chief bane. The poorest need rarely lack for fresh meat, but the fascination of the chase was destructive to habits of industry. Mechanics deserted their trades and many of the lower classes neglected to provide for their families, falling into a savage's hand-to-mouth way of depending on the dog, the gun, the trap, and the fishing-line for a living. The agriculture of the colonies was lowered in character from the perpetual temptation offered by well-stocked woods and virgin streams; in North Carolina the evil was so great that the woods became at length infested by hunters who led a half-savage life in defiance of law.



**Deer Most Sought For**

Deer were most sought for, and many were the ways of making war on them. The settlers early learned a favorite Indian method of hunting them. A hunter inclosed himself in a deer-skin, so as to peer out of the breast of a mock stag at his game, and, thus disguised, was able to get almost into the midst of the unsuspecting herd. Sometimes a horse was trained to walk gently by his master's side, shielding the man from sight. As the woods were full of horses, the deer took no alarm until the rifle had brought down its victim. Trees were felled to tempt the deer to browse upon the tender twigs, while the hunter lay in wait behind the boughs. Night-hunting was then as now a common method; a negro with a flaring torch went before the sportsman, who killed the dazed animal while it was looking into the light; or the hunter floated up to his game in a canoe with a blazing fire in the middle of it.

In the Carolinas and the up-country of Virginia, deer were run down with dogs by sportsmen on horseback; but along the coast the frequent bays and rivers rendered dogs and horses of no avail. The Virginians drove sharp stakes where the deer were accustomed to leap into a field of peas; on these stakes they would find the animals impaled in the

morning. The great iron traps set for deer in New Jersey and Pennsylvania were found dangerous to men. A favorite way of capturing these creatures in Pennsylvania, and of ridding the land of bears and wolves at the same time, was to get up a "drive." The name and the method of procedure resembled the "Drift of the forest" in England, by which all the animals in waste or common ground were brought together and their ownership settled.

## Unlawful Methods Banned

In Pennsylvania a ring of men surrounded a great tract of country, and then in exact order, carefully regulated, drew inward toward a center, inclosing deer, bears, wolves, turkeys, and other game, shooting the animals as they made desperate efforts to escape. New England swamps were "beat up" for wolves in a similar way. The excitement of such a day of slaughter, increasing to the very last, may be easily imagined. A more common and destructive device was that of "fire-hunting." A band of men would set fire to the leaves around a circle of five miles or more; this fire, running inwards from all sides, drove the frightened deer and other game to the center, where they were easily slaughtered by the hunters outside the blazing circle. This mode of hunting was at length forbidden in several of the colonies, partly because it was dangerous to property, and partly because, as wild creatures grew scarce, it became desirable to preserve the game from extermination. The slaughter and waste of venison was excessive at the first coming of fire-arms. One planter's household in Maryland was said to have had eighty deer in ninety days, and dry bread was at length thought preferable to a meat of which everybody was tired.

The South Carolinians made the deer-hunt a prime social pastime. For this they gathered regularly at club-houses, from which they started the chase, running the deer with hounds; the sportsmen following with tremendous swiftness on horseback, regardless of underbrush and more dangerous obstacles. Little lads rode pellmell with the rest, and boys of ten years could show tro-



phies from deer they had killed. Foxes were also hunted by men on horseback, especially in Virginia and Maryland, where the traditions of English country gentlemen were preserved. But there was little that resembled the English sport; the American deer or fox hunter endured fatigues and discomforts, and exposed himself to perils, never dreamed of by an English sportsman of that time, whose worst dangers were ditches and hedge-rows, and whose stags were carted home alive to be chased another day. One of the many devices for taking foxes in New England was to bait them with a sledge-load of heads of cod-fish, the hunter shooting them from behind a pale fence. One man sometimes killed ten in a night. Wolves were caught on mackerel hooks, bound together with



thread, wrapped with wool and dipped in tallow. Other colonial methods of capturing wolves were by pits lightly covered so as to let them fall in; by pens of logs slanting inward, open at the top and baited within; and by traps and spring-guns.

## Many Ingenious Devices Used

Smaller "vermin," opossum, raccoons, and such like, were hunted then as now by small boys, negroes, and mongrel dogs. Squirrels were prized above most other sorts of game, and were also shot as pernicious consumers of the farmers' grains; matches were made between groups of men, and squirrel scalps were counted at night to decide which party had won. The wild turkey is the prince of all game birds. The colonists hunted it not chiefly for sport, but for its delicious meat; and for taking it then "had many pretty devices besides the gun," such as traps that would catch a whole flock at once. Fires built at night near their roosting-trees so bewildered the turkeys, that one might shoot at them more than once before they would take wing.

The flight of migrating pigeons at certain seasons, darkening the very sky with their multitude, is a phenomenon little known in this generation to people east of the Allegheny mountains; and inconceivable to one who has not seen





it. But in colonial days such flocks were seen all along the coast. Cotton Mather, with characteristic fondness for the improbable, suggested to the Royal Society that these birds migrated to and fro between the earth and a statellite near at hand, but invisible. Their abundance at certain seasons was a great relief to the poor in the more settled regions. They were shot down with guns fired into the wide flocks without definite aim; they were taken in nets, they were beaten off their roosts at night by negroes and others with poles, and they were knocked down with sticks as they flew low over the housetops in Philadelphia. In the Boston market they were sometimes sold at a rate as low as a cent a dozen. Waterfowl in their season were almost as abundant as the pigeons.

#### Pioneers Trained in Use of Firearms

There were many other beasts and birds captured and killed by other devices. But these will serve to show what life in all but the most densely settled regions was—a school, not of industry, but rather of happy-go-lucky vagabondage. It was a rare school for soldiers. The rustic colonists were accustomed from boyhood to make war on the creatures of the forest by cunning, courage, and marksmanship. With hardship and woodcraft they were familiar, from childhood. A traveler in the colonies about 1774 says: "As all the country people are brought up to the Use of Fire Arms from Mere Children, they in general handle a Musket more dextrously and with greater ease than almost any

other Set of People in the World." It was this training that made them more than a match for Indians, and superior to British veterans in fighting against the French in the woods. In the rebellion against the imperial power, it was their habitual endurance of the fatigues of the march and the privations of the camp, with their deadly marksmanship that made them so formidable. These life-long hunters were never raw troops, and in a crisis like that which culminated at Bennington and Saratoga, the farm-houses poured out riflemen and soldiers ready-made by all the training of their lives. When beaten from towns and forts in the Carolinas, the soldiers became partisan rangers, living in the recesses of the familiar forests, and picking off an English officer with as little ruth as they felt in shooting a stag, and with much more exultation.

#### Pioneer Angling

It would be tedious, if it were possible, to describe the various methods used by the colonists for taking fish. Beverley, about 1700, mentions "Trolls, Casting Nets, Setting Nets, Hand-fishing and Angling," as well as "Spillyards," which last were long lines "staked out in the River, and hung with a great many Hooks on short strings, fastened to the main line, about three or four Foot asunder." Seines were widely used, and seem to have been also known as sieves or "sives" in some places. Weirs were in use, and these were rather an improvement on Indian devices than an introduction of the English "hedges."

New Englanders went in multitudes, as the Indians before them had been wont to do, to the falls of the rivers to intercept the ascending shad and salmon. The vast crowds of men gathered at the fishing season made a sort of merry-meeting, and there was much drunkenness and reveling. From these assemblages men went away with their horses laden with fish. Shad were too plentiful and incredible stories are told of three thousand taken at a haul; they sold for from one to two cents apiece of our present money, and were held so cheap that the salmon were sometimes picked out of a net and the shad rejected. Well-to-do people only ate shad on the sly, lest they should



be suspected of not having a good supply of pork.

#### Spearing Fish

The colonists may have brought the art of spearing fish "with a harping iron or gill" from the mother country, where in some places trout were thus taken by torchlight, but it is more likely that in this they took lessons from the expert savages. The Virginians and Marylanders had a method all their own; riding their horses into the water on the shoal beaches of their rivers, they speared fish torch in hand, much as a Centaur might have done. Hardly less picturesque were the Connecticut River fishermen when they waded into the water holding a flaring torch of birch-bark, while they caught lampreys by seizing them in their mittened hand.

Notwithstanding all the wholesale ways of fishing which were practiced without remorse and with small hinderance from the laws, one catches now and then a glimpse of a quiet angler of the true Izaak Walton breed. Such was the Virginia historian Beverley, who gently intimates rather than boasts of his success in saying: "I have set in the shade at the Heads of the Rivers Angling, and spent as much time in taking the Fish off the Hook as in waiting for their taking it." In the same restful tone the colonial historian of New York digresses to let us know that the long, lazy summer voyage by sloop from New York to Albany was "exceedingly diverting to such as are fond of angling."

#### OBSOLETE DEER RIFLES

By LEE CADY, WRIGHTS, PA.

IN LOOKING over back issues of the GAME NEWS I noticed an article in the April, 1935 number, "Do You Shoot or Half Shoot Your Game?" This was written by F. R. Mattern. He calls the 45-70, the 38-55, the 32-40, the 44-40, and the 38-40 cartridges obsolete and game wasters, while he says the 30-30 and the 30-06 are excellent. I will agree that the .44 and .38 are much too light for deer, but the former three "obsolete rifles" are splendid for deer. I have shot nine deer myself and this fall saw deer shot with all kinds of rifles, and will say that my choice would be the 38-55, with long barrel preferred.

If a novice at deer hunting had been in any place this fall, he would probably have lost the deer. It was nearly dark when I

saw a buck at a distance of about 40 yards. I made one shot with a 30-06 Springfield, using 180 grain expanding cartridges. The deer didn't fall, but whirled and ran in the opposite direction. Upon examining the place, I found no blood, hair or other signs that I had hit him. Following the tracks, however, I found a place where he had fallen, but still there was no blood. I followed the tracks over a small bench and saw him jump out ahead of me. He ran straight away and I made a second shot. This shot struck him on top of the hips and downed him. I found the first bullet had hit ahead of the hips and low down. It had not gone through and he had not bled. Most anyone who was new at hunting would have called it a miss, and thus lost his buck.

If I had been using a 38-55 or a 45-70, with both of which I've had a great deal of

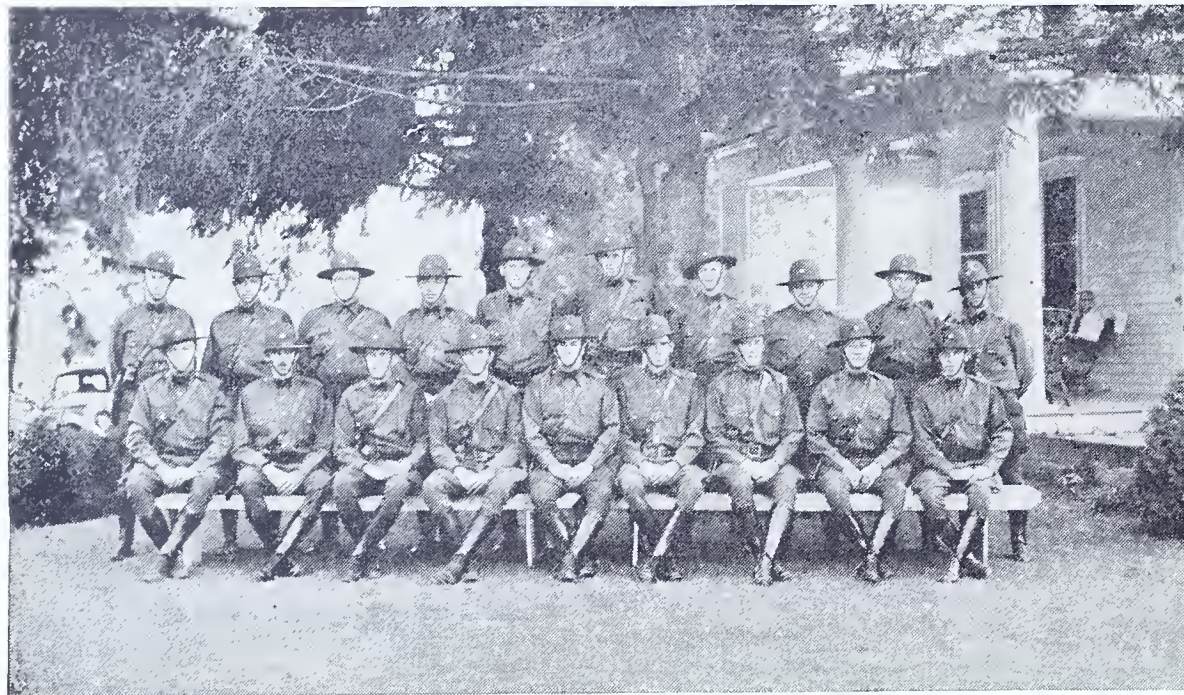
experience, the bullet would, no doubt, have gone through, leaving a plain trail of blood to follow if it had not downed him. On bare ground a blood trail is most essential. As to these obsolete rifles not having range enough, I never thought it necessary. One cannot see horns on a deer much over 75 yards and couldn't hit him farther than that anyway through the thick second growth timber of the deer sections of Pennsylvania. Either of these two rifles with smokeless powder are good up to and including 150 yards, which is plenty far enough through brush.

I would like to have someone try a long-barreled 32-40, using soft point bullets and smokeless powder against a 30-30 and let me know the result. One can't tell by reading the ballistics of these two shells. I have made much cleaner kills with a 32-40 than with the 30-30.



# CURRENT TOPICS

## OFFICERS OF DIVISION C



Left to Right: R. E. Latimer, Game Protector, Sullivan Co.; L. H. Wood, G. P., Tioga Co.; F. F. Crosby, G. P., Lycoming Co.; Fred Fisher, G. P., Union Co.; J. B. Ross, Div. Supervisor, Div. C.; E. S. Cranmer, G. P., Bradford Co.; B. P. Yeager, G. P., Montour and Northumberland Cos.; M. L. Hagenbuch, T.G.P., Lycoming Co.; C. F. Walker, T.G.P., Snyder Co. Second Row: O. M. Pinkerton, T.G.P., Lycoming Co.; H. E. Baker, Ref. Keeper, Tioga Co.; L. H. Estep, Ref. Keeper, Columbia Co.; C. H. Shannon, Ref. Keeper, Union Co.; E. W. Carpenter, Ref. Keeper, Sullivan Co.; W. G. Zellers, Ref. Keeper, Bradford Co.; J. C. Newcomer, Ref. Keeper Lycoming Co.; L. Gleason, T.G.P., Lycoming Co.; R. C. Case, T.G.P., Bradford Co.; G. W. Koehler, Ref. Keeper, Lycoming Co.

## TWO HUNTERS LOSE PERMITS FOR FIVE YEARS

The Game Commission, following hearings recently in the Court House at Williamsport, revoked the hunting licenses of Basil Richardson, of Cedar Run, and Paul Weaver, of Jersey Shore for negligence and carelessness in the handling of firearms while hunting. The Commission cited the two Lycoming County men for five-year revocations of their hunting licenses.

## SPECIAL LICENSES

The following special licenses have been issued from June 1, 1935 to May 31, 1936:

Taxidermy .....	229
Ferret Owner's .....	74
Ferret Breeder's .....	1
Propagating .....	383
Collecting .....	16
Fur Dealer's (\$5.00) .....	202
Fur Dealer's (\$10.00) .....	290
Fur Dealer's (\$50.00) .....	15
Fur Farming .....	49
Field Trials .....	23

The total revenue received from the above special licenses was \$11,106.00.

## DEER DAMAGE

Sixty-five deer were killed during June for damaging crops and truck patches of landowners.

The Game Commission recently obtained the services of Professor H. M. Wight of the University of Michigan in an advisory capacity. Professor Wight has specialized for many years in farm-game programs and will assist the Game Commission in this capacity for the next month or two.

## MANY BEAVERS

During the two week's open season, a total of 461 beaver were taken on Allegheny National Forest, or approximately 20% of the total number trapped within the State. Only a few of the total number of beaver trapped were weighed. 63 pounds was the largest and 43 pounds the average weight. The average price received for the pelts ran close to \$9.00. Kits and damaged skins brought \$3.00 to \$4.00, while some of the larger skins brought as high as \$18.00. All of the pelts examined were prime.

## NEW TECHNICIANS EMPLOYED

During the past few months a game land technician and a land acquisition assistant were added to the staff of the Bureau of Refuges and Lands. They are John B. Sedam of Williamsport, and Arthur W. Rossiter of Phoenixville. These men will assist in the Commission's farm-game program.

## TITLE SECURED FOR ADDITIONAL STATE GAME LAND ACREAGE

The aggregate area of State Game Lands was recently increased to 507,406.4 acres by the conveyance to the Commonwealth of thirteen tracts comprising 3,927.4 acres. These tracts had been approved for purchase by the Board during the past year. The boundary lines of all tracts were surveyed and titles examined under the direction of the Game Commission. Titles having been found satisfactory to the Department of Justice, they were conveyed in the customary manner. The location, acreage and name of the grantor for each of the various tracts follows:

<i>Crawford County.</i> Five tracts were added to State Game Lands Number 69, bringing the total area of those lands to 2,505.5 acres.	
Flossie Grove	29.9 acres
Sylva Luper	51.3 "
Grant Harvey	69.3 "
County Commissioners	50.1 "
Della M. Sanderson and Ermine S. Maryott	75.1 "

275.7 acres

*Fulton County.* One tract was added to State Game Lands Number 49, bringing the total area to 3,314.1 acres.

Ellen Lee Creek 7.7 acres

*Huntingdon County.* One tract became part of State Game Lands Number 73, bringing the total area of those lands stretched out along Tussey Mountain to 14,977 acres.

Vera M. Beyer 1,033.4 acres

*Huntingdon County.* Two tracts were added to State Game Lands Number 81, in Springfield Township, which now contain 2,054.4 acres.

Harbison Walker Refractories Company 1,173 acres  
J. L. Kling 263.6 "

1,436.6 acres

*Somerset County.* One tract was added to State Game Lands Number 111, in Lower Turkeyfoot Township.

J. B. Davis & Sons 91.3 acres

*Huntingdon County.* The purchase of two tracts brought State Game Lands Number 121 into existence in Tod and Wood Townships.

Roy R. Mull 289.2 acres  
County Commissioners 154.9 "

444.1 acres

*Crawford County.* State Game Lands Number 122 came into existence by the purchase of one tract in Steuben and Troy Townships.

A. L. Caflisch & Sons' Lumber Company 638.6 acres

## PROSECUTIONS

Game Protectors prosecuted 68 cases during June, and \$713.00 in penalties were deposited to the Game Fund.



BOARD ACTS ON LAND OFFERS

At the regular meeting of the Board held July 2, 1936 options for a total of 39,235.9 acres of land were considered, of which 13,607.5 acres, comprising 16 tracts, were approved for purchase. A counter offer was made for another tract, containing 5,000 acres, which will be placed under contract for purchase if the owner agrees to accept the Board's conditions. Offers for 8 tracts aggregating 5,418.8 acres were rejected, and action on 20 offers comprising 15,209.6 acres was postponed.

The tracts approved for purchase, excepting the counter offer, are as follows:

**TIOGA COUNTY, Tioga Township:**

- 1,211 acres offered by Lenna M. Gibson & Sarah E. Van Ness.
- 550 acres offered by Fred W. Loveless.
- 401.5 acres offered by the Elmer K. Snell Estate.
- 88 acres offered by Cedil and Robert Giles.

Woodland and old farms in good deer, grouse and rabbit territory.

Near State Game Lands No. 37.

**CRAWFORD COUNTY, Sparta Township:**

- 100 acres offered by Mrs. Katherine Streich.

148 acres offered by the Crawford County Commissioners.

Two old farms with a small proportion of woods.

**BEDFORD COUNTY, Cumberland Valley, Harrison & Londonderry Townships:**

- 1,645 acres offered by the Bedford Lumber Company.
- 881 acres offered by Arthur P. Baugh, et al., Trustees.

Near State Game Lands No. 48 in turkey territory. All woodland.

**FAYETTE COUNTY, Georges Township:**

- 1,500 acres offered by the Carnegie Land Corporation.
- All woodland.

**FAYETTE COUNTY, Dunbar Township:**

- 100 acres offered by Samuel and Mary Bryner.

A clearing which constituted an interior holding within State Game Lands No. 51, and therefore a very desirable acquisition.

**LACKAWANNA COUNTY, Lehigh Township:**

- 230 acres offered by Charles F. Wagner.
- Adjoins other lands now under contract for purchase in good game territory.

**LUZERNE COUNTY, Ross, Lake & Fairmount Townships:**

- 3,217 acres offered by Arthur L. Stull & Company.
- 1,669 acres offered by Arthur L. & Albert A. Stull.

Woodland between Bowman's Creek and State Game Lands No. 57. Both tracts will become a part of No. 57 lands when conveyed.

**SULLIVAN COUNTY, Colley Township:**

- 1,133 acres offered by the George D. Jackson Estate.

Woodland connecting several segments of State Game Lands No. 66.

**CENTRE COUNTY, Burnside Township:**

- 434 acres offered by Joseph J. Rhoads, R. J. Kelley and Bertha C. Taylor.

This land is good turkey territory, adjoins State Game Lands No. 100, and will

become a part thereof when title is obtained.

**HUNTINGDON COUNTY, Springfield Township:**

- 300 acres offered by the Altoona Properties, Incorporated.

Woodland connecting several segments of State Game Lands No. 81.

INTERNATIONAL ASSOCIATION HOLDS 30TH CONVENTION

The International Association of Game, Fish and Conservation Commissioners will hold its Thirtieth Convention at Grand Rapids, Michigan. The American Fisheries Society will hold its annual meeting immediately following the International meeting, on the 2nd, 3rd and 4th of September. There will be the usual joint banquet.

The Convention headquarters for both meetings will be the Pantlind Hotel.

WHAT OUR READERS THINK

"The position of a Game Commissioner is a thankless one at the very best, and there is always more criticism than praise

connected with the job; but let me take this opportunity to compliment you on the action you have taken regarding the opening hour of the first day of the small game season. In a conversation last fall with the local protector, Leslie Wood, this matter was brought up, and we agreed that it would be a fine thing if this step was taken, not only from the standpoint of reducing accidents, but that it would save the slaughter of many female pheasants, which were shot before daylight by hunters much too eager to fill their bag. It came to my ears of one party that last year killed six hens the first morning before it was light enough to distinguish the male from the female, and by hunters of the class who shoot at anything moving and then investigate to see what they hit.

"There is another thing I also hope to see incorporated in the rulings: the use of retrieving dogs, or dogs of some kind that will locate fallen game. Two years ago I ran across four fellows who informed me that they had knocked down six male ringnecks, but were unable to find them afterwards. Fortunately I was able to locate four of these birds for them, but the other two I could not find. The use of a dog in this party would have saved this unnecessary loss of game. Again let me compliment you on this year's ruling."—D. L. Williams, Mansfield, Pa.

(Continued on page 16)



The Game Commission's campaign to keep people from picking up "lost" fawns and other young animals succeeded admirably this year and only a very few cases were reported. Last year a great many were carried off.





Apple leaves, while they last, are good forage for captivity reared grouse

APPRECIATION

The Game Commission and the sportsmen appreciate very much the cooperation of J. Hansell French, Secretary of Agriculture, for the energetic program he carried on in an effort to get farmers to protect nesting game birds by universal use of the flushing bar on mowing and harvesting machines.

WHAT OUR READERS THINK

(From page 15)

"I have read with a great deal of interest the article in your magazine and the other information about your training school for field workers. It is my belief that this is a tremendous step in the right direction in providing trained personnel to handle our wildlife problems, and Pennsylvania is to be congratulated on such a forward-looking program."—Ira N. Gabrielson, Chief, Biological Survey.

"I have read the several articles 'ear marked' by you and appreciate the notations. Your push in this direction is very timely and viewed with much interest by many sportsmen in these parts. Seth here is what has been happening. After you left Pennsylvania many of us saw what was going on inside the Commission but instead of making useless ado about it, we began a program of our own. We leased hunting privilege rights from various landowners, stocked the areas and carried on a system of feeding and protection in vermin control. The landowners found it worthwhile to cooperate in posting their land and destroying vermin. The members of our group were having good results but a rather selfish enjoyment. The idea was not particularly unifying nor favorably received among the general class of sportsmen.

"Probably the worst feature in reaction was a wider spread of 'trespass' notices

in the best hunting areas. The extra premiums and more game for the landlord gradually crowded out the less favored hunter in favor of selective hunting privileges.

"Now as I see it, your plan will be more liberal and fair for the average hunter. I do not wish to seem dictatorial but I believe it would be worthwhile to let it out that after the small reserves have been established in the heavily populated districts, the lesser populated districts will enjoy the same advantages. Up until a certain point of game load in the south-eastern counties, the outlying districts will be carrying a heavy annual sportsmen population."—Tom Shambach, Middleburg.

GOSHAWK KILLS MANY GROUSE

Wm. J. Carpenter, District Game Protector of Forest County, tells the following story about a family of goshawks which he observed on May 8 while patrolling the Fork Run section of Kingsley Township, Forest County, in company with Traveling Game Protector Rodney P. Schmid, B. C. Park, in Charge of Wildlife in the Allegheny National Forest and Forest Ranger John Pierce.

While working along an old trail the men discovered a small pole on which were some fresh claw marks. On the ground beneath the pole were the bones of one gray rabbit and three grouse.

They sensed immediately that a hawk had been at work and upon investigating, observed an adult female goshawk fly from a large pine tree. Her nest, which was found later, contained one egg and one fledgling.

They visited the nest a week later, at which time the other egg had hatched. On this trip they found the breast bones of 12 more grouse and four days later,

SUMMARY STATEMENT OF BOUNTIES ALLOWED ON NOXIOUS ANIMALS FOR THE PERIOD OF JUNE, 1936

Counties	Wild Cat	Gray Fox	Weasels	Amount
Adams .....	0	0	25	\$25.00
Allegheny .....	0	3	18	30.00
Armstrong .....	0	0	53	53.00
Beaver .....	0	0	22	22.00
Bedford .....	0	1	53	57.00
Berks .....	0	0	116	116.00
Blair .....	0	0	44	44.00
Bradford .....	0	1	41	45.00
Bucks .....	0	0	49	49.00
Butler .....	0	2	64	72.00
Camhria .....	0	3	55	67.00
Cameron .....	0	0	5	5.00
Carbon .....	0	2	11	19.00
Centre .....	0	2	58	66.00
Chester .....	0	0	71	71.00
Clarion .....	0	0	41	41.00
Clearfield .....	0	1	43	47.00
Clinton .....	0	3	17	29.00
Columbia .....	0	0	46	46.00
Crawford .....	0	0	55	55.00
Cumberland .....	0	0	49	49.00
Dauphin .....	0	0	39	39.00
Delaware .....	0	0	4	4.00
Elk .....	0	1	15	19.00
Erie .....	0	0	30	30.00
Fayette .....	0	1	28	32.00
Forest .....	0	0	4	4.00
Franklin .....	0	0	40	40.00
Fulton .....	0	0	12	12.00
Greene .....	0	1	8	12.00
Huntingdon .....	0	1	35	39.00
Indiana .....	0	1	38	42.00
Jefferson .....	0	2	22	30.00
Juniata .....	0	2	15	23.00
Lackawanna .....	0	3	15	27.00
Lancaster .....	0	4	106	122.00
Lawrence .....	0	3	42	54.00
Lebanon .....	0	0	16	16.00
Lehigh .....	0	0	44	44.00
Luzerne .....	0	2	47	55.00
Lycoming .....	0	7	26	54.00
McKean .....	0	1	24	28.00
Mercer .....	0	0	23	23.00
Mifflin .....	0	3	13	25.00
Monroe .....	0	1	11	15.00
Montgomery .....	0	1	57	61.00
Montour .....	0	0	20	20.00
Northampton .....	0	0	39	39.00
Northumberland .....	0	0	29	29.00
Perry .....	0	4	23	39.00
Philadelphia .....	0	0	11	11.00
Pike .....	0	1	9	13.00
Potter .....	0	0	8	8.00
Schuylkill .....	0	0	62	62.00
Snyder .....	0	0	13	13.00
Somerset .....	0	7	64	92.00
Sullivan .....	0	0	6	6.00
Susquehanna .....	0	1	17	21.00
Tioga .....	0	0	28	28.00
Union .....	0	0	17	17.00
Venango .....	0	0	20	20.00
Warren .....	0	0	13	13.00
Washington .....	0	1	36	40.00
Wayne .....	1	4	13	44.00
Westmoreland .....	0	0	33	33.00
Wyoming .....	0	1	13	17.00
York .....	0	0	64	64.00
Total .....	1	71	2,188	\$2,487.00
Claims for the month—1,248.				

when they called again, both adult birds were in the nest. The male viciously attacked and was shot, flying over a quarter of a mile with a .22 calibre bullet through his body.

During the confusion which ensued, Mr. Carpenter claims that the female returned and removed one of the young from the nest, and when he climbed the tree, he found only one bird, which he took along.

On this trip he found the breast bones of 8 more grouse and the bones and fur of a rabbit, a chipmunk and a fox squirrel.

In West Chester, Pa., a cat has adopted three baby ducks though she has a litter of four kittens of her own. At night the ducklings snuggle up against the cat and peacefully sleep with the kittens.





## BIRD LORE

Photos by  
Miss Esther Heacock



Upper left: Great-crested Flycatcher  
at nest box.

Upper right: Robin at nest.

Center: Song Sparrow at basket  
of seeds.

Below: Towhee at food  
shelf.



The new grouse  
brooder house  
at the Fisher  
Farm.



Covered field at  
Loyalsock Farm  
with heavy  
c o v e r  
growth.

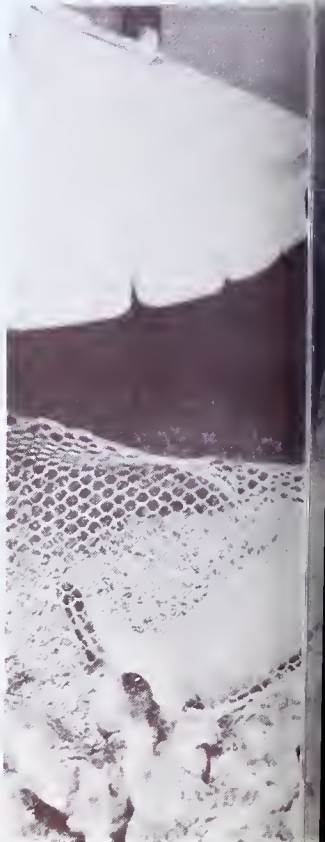


Driving young Ringnecks  
into brooder house for  
clipping — F i s h e r  
Farm.



## The Game F

A young L



Clipping  
Ringnecks



Young turkeys at  
Juniata Farm.



The dusting box—  
a favorite place  
for young  
grouse.



## s in Pictures

Young wild turkeys  
at the Juniata  
Turkey Farm.



of young  
Farm.





THE time of year when young animals are more apparent. The two young birds are pie-billed grebe in foreground and coot in the background. The fearsome owl is a young barn or monkey face. The bear and the skunk are both young animals, but the wildcat is an adult.





RCBH-1-574M-6-36FEE \$2.00

1936 Pennsylvania  
Resident Hunter's  
License

Name

Street or R. F. D.

City

Occupation:Age:

Color of  
Hair:

Color of  
Eyes:

Height:

Identification by:

Auto Driver's  
License

Tax  
Receipt

Other Reliable  
Identification

If foreign born—No. on  
Naturalization Papers

Issued193

County Treasurer

GOOD UNTIL AUGUST 31, 1937

This License is not Transferable. Avoid Fine. Sign and Carry  
License while Hunting and Display Tag on Middle of Back.

(License is not legal until signed here in ink by owner)

Attach Federal Duck Stamp (Paste Edge) before hunting waterfowl  
(Over)

1936 Pennsylvania  
Resident Game  
Killed Report

I certify that the report below is a complete record of all birds and  
animals killed by me since September 1, 1936.

Name

Street or R. F. D.

City

NO. KIND

NO. KIND

Rabbits, Cottontail

Shore-Birds (State  
Species)

Raccoons

Wild Geese

Squirrels (State Species)

Wild Ducks

Wild Turkey

Blackbirds

Ruffed Grouse (Common-  
ly called pheasant)

Woodcock

Ringneck Pheasants

Stray House Cats

Quail, Bobwhite

Other Predators

DeerSexPointsWt.lbs.

Killed inCounty

BearSexWt.lbs.

Killed inCounty

Please Mail This Report (which is required by law)  
Promptly After the Season Closes.  
(Over)

1936 Pennsylvania  
Resident Large  
Game Tag

ThisDeerBearwas killed at

A. M.  
P. M.

on1936, in

Twp.

inCounty

byName

Address

Examined and Approved

1936 Pennsylvania  
Resident Large  
Game Tag Stub

Deer  
Bear

killed

A. M.  
P. M.

on1936

inTwp.

inCounty

byName

Address

Total points on antlersSex

Approximate weightlbs. (Hog Dressed)

Checked byInspecting Officer

YOUR LARGE  
GAME TAG

Please attach this Large Game Tag immediately  
upon killing your deer or bear. If you kill both,  
make a duplicate on cardboard giving the same  
information, and attach it to your second animal.  
Complete the information, preferably printed, on  
both parts of the tag, but do not detach the stub.  
If stub is not collected by an inspecting officer,  
please mail entire tag within five days after the  
season closes to the Board of Game Commissioners,  
Harrisburg, Pa.

General Instructions

Your license has been issued in three compact  
parts. Fold on the marked lines and carry on your  
person at all times while hunting.  
Please mail the Game Killed Report immediately  
after the close of the hunting season. By using the  
Large Game Tag as directed and reporting the com-  
plete kill of game, you will aid your Commission  
to provide better hunting for all. Your coopera-  
tion will eliminate the necessity for drastic regula-  
tions to obtain an accurate check on the annual  
game kill.

BOARD OF GAME COMMISSIONERS

NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED  
STATES

BUSINESS REPLY CARD  
FIRST CLASS PERMIT NO. 226, Sec. 510 P. L. & R., Harrisburg, Pa.

BOARD OF GAME COMMISSIONERS  
HARRISBURG, PENNSYLVANIA

1936 OPEN SEASONS AND BAG LIMITS

Open season includes both dates given, Sundays excepted. The  
small game and trapping seasons, except waterfowl, begin at 9 A. M.  
on first day. Write Game Commission for Beaver trapping regulations.

UPLAND GAME (Small game possession limit 2 days' bag)	BAG LIMITS	Day Season	OPEN SEASONS
Wild Turkey	1	1	
Ringneck Pheasants, males only	2	8	
Ruffed Grouse	2	8	
Bobwhite Quail, Gambel Quail	2	8	
Valley Quail, (combined kinds)	4	20	Nov. 6—Nov. 26
Blackbirds	Unlimited		
Rabbits, Cottontail	4	20	
Squirrels, Gray, Black and Fox, (combined kinds)	6	20	
Squirrels, Red	Unlimited		Nov. 6—Aug. 15, 1937
Raccoons, all counties by indi- vidual or hunting party	2	10	Nov. 6—Dec. 31
Bear, over one year old by indi- vidual or hunting party	1	1	Nov. 23—Nov. 26
Deer, male with two or more points to one antler	1	1	Dec. 1—Dec. 12
Deer, male as above, by hunting party	6	6	
NO OPEN SEASON—Lares (Snowshoe or Varying), Reeves Pheasants, Hungarian and Chukar Partridges, Elk, Antlerless Deer, and Cub Bears.			
MIGRATORY GAME (Possession limit one day's bag)			
Rails, except Sora	13	Unlimited	Sept. 1—Nov. 30
Sora	25	Unlimited	
Guillemots	13	Unlimited	Oct. 13—Nov. 14
Woodcock	4	20	
Snipe, Wilson or Jack	15	Unlimited	
Wild Ducks (Some species closed)	10	60	Nov. 1—Nov. 30
Wild Geese (Brant closed)	4	30	
Coots or Moullets	13	Unlimited	
(Ask the Game Commission for additional Federal regulations)			
FUR-BEARERS (Traps not to be set before 9 A. M. the first day)			
Minks, Opossums, Skunks	Unlimited		Nov. 6—Feb. 28, 1937
Muskrats, (by trapping only)	Unlimited		Dec. 1—Mar. 15, 1937
Beavers, (by trapping only)	3	3	Mar. 1—Mar. 15, 1937
NO OPEN SEASON—Otters			
*No 1936 open season on Turkeys in Berks, Bradford, Bucks, Cameron, Carbon, Clarion, Clearfield, Dauphin, Elk, Fayette, Forest, Jefferson, Lackawanna, Lebanon, Lehigh, Luzerne, Lycoming, Monroe, Northampton, Pike, Potter, Schuylkill, Tioga, Warren, Wayne, Wyoming and York Counties.			
It is unlawful to hunt any game on Sunday. On the first day the season for all small game and fur-bearers opens at 9 A. M. thereafter during the open season upland game hunting is local from one-half hour before sunrise to one-half hour after sunset, except that wild turkeys and ruffed grouse may be hunted only between sunrise and sunset, and raccoons may be hunted only between one hour before sunset and one hour after sunrise of the day following, unless taken in traps. Migratory game birds may be hunted only between 7 A. M. and 4 P. M.			

THE 1936 LICENSE

An entirely new and much improved  
form of Hunters' License will be issued  
to Pennsylvania's nimrods this year, an-  
nounced the Pennsylvania Game Com-  
mission recently. Per facsimile, without  
license numbers, reproduced on this  
page in reduced size.

The licenses will be on tough card-  
board, in three parts, folded twice, so  
as to form a convenient three-ply broch-  
ure. It is of a size which can easily be  
carried in the coat or in a holder under  
the tag on the middle of the back. The  
hunting seasons and bag limits will be  
printed on the license so no one may  
violate the law through ignorance.

Identification will now be necessary be-  
fore receiving a 1936 hunter's license,  
Game Officials advise, pointing out that  
this new requirement was added in order  
to tighten up on those individuals who  
illegally secured licenses for themselves  
and others in the past. The identifica-  
tion, as approved by the Game Commis-  
sion and the Department of Revenue, in-  
cludes either an automobile drivers li-  
cense card, a tax receipt, or other fool-  
proof identification. Another space on  
the license requires the recording of  
naturalization paper numbers of foreign-  
born residents.

Another new feature of the license this  
year, which will have the approval of all  
big game hunters, is a large game tag in  
two sections, one of which will be de-  
tached by the game official examining the  
deer or bear killed. This will materially  
expedite inspection in the field.

The report of game killed has also been  
improved to secure more specific in-  
formation on the sex and weight of  
bears taken, and the sex, points, and  
weight of deer taken. The reverse side  
of this part of the license contains a self-  
addressed business reply card for the  
convenience of the hunter in submitting  
his game kill report promptly after the  
close of the season, a boon to all license  
holders.

All of these features will enable the  
hunter more intelligently to apply for his  
license and subsequently to report the  
animals taken under it. At the same  
time it will enable the Game Commis-  
sion to keep a more accurate check on the  
licensees and to handle its work more  
efficiently.

The Resident and Special Issue Licenses  
will have green backgrounds with yellow  
numerals; the Non-resident Licenses,  
yellow backgrounds with black numerals;  
and the Alien Non-resident Licenses,  
light blue backgrounds with dark blue  
numerals.





Panorama of annual field day of Lycoming County consolidated sportsmen's clubs

# HERE AN

## LYCOMING SPORTSMEN HOLD GALA OUTING

Over twenty-five hundred sportsmen from north central Pennsylvania attended the annual picnic of the Consolidated Sportsmen's Association of Lycoming County, at Shore Acres, along the picturesque Loyalsock Creek, on July 29, and took part in a wide variety of entertainment and contests lasting the entire day.

Committees outdid themselves in contributing amusement and prizes. The sporting events included Class A, B, and C Trap Shooting, and a special wild cat trap contest. There were also large and small bore rifle shooting, pistol shooting, bait and fly casting, archery, quoits, and running deer target.

A rodeo demonstration by the Pennsylvania State Police provided thrills for the spectators, and a "German" band provided the laughs.

O. M. Deibler, Fish Commissioner, H. S. Stackhouse, his chief lieutenant, Game Commissioners, Wm. G. Fluke and Samuel S. Castner, Seth Gordon, Game Secretary, and Judd Turner, his assistant, and many other administrative and field officers of both departments attended the picnic as guests of the Association.

Commissioner Castner and former Commissioner J. August Beck, played a big part in the program of the day.

The Montgomery Federation of Sportsmen's groups recently celebrated their first anniversary. Among those attending were Professor H. M. Wight, Wildlife Advisor for the Game Commission; Richard Gerstell, Chief, Division of Game Research and Distribution; Ambrose Gerhart, Game Protector; Harry Cole, Fish Warden; and Fred E. Brouse, Forest Supervisor.

Robert Kaler, of Hatfield, presented the Montgomery Sportsmen's organization with a beautifully mounted brown trout, to be placed in their permanent meeting hall which is to be chosen in the near future.

The Lansdale Sportsmen's Association was accepted as a new member in the Federation at this meeting.

The Carrick Sportsmen's Association of Allegheny County recently completed a fine new club house. The association also has skeet and trap lay-outs, a small and high-power rifle range, and expect soon to install bait and plug casting courses.

Dog Training Season—August 20 to end of February.

## WITH THE CLUBS

The Blawnox Sportsmen's Club had a rifle shoot recently after which the steward, George Walzer, served broiled Rattle Snakes. Some of the members refused to eat, but when they saw the others eating them and not falling dead they also tried and all enjoyed the Snakes and refreshments. There are no reports of Snake fatalities to date.

The Tyrone Sportsmen's Association held its second annual outing at the Evergreen Hunting Club grounds in Spruce Creek Valley on July 9, at which time action was taken on a proposed site for a new association club house.

The Columbia Fish and Game Association was successful in hatching and rearing 167 ringneck pheasant chicks from an allotment of 300 eggs furnished by the Game Commission. They also reared 500 chicks sent them from the State Game Farms. The birds, which are now about ten weeks old, are in splendid physical condition and will eventually be released in depleted areas in Lancaster County.

At a recent meeting of the Kishacoquillas Valley Sportsmen's Association Walter B. Wilson of Lake Park, Lewistown, was elected President, Roger Sweigart of Belleville, treasurer and J. F. Morgan of Lewistown, Secretary. This club has been one of the most active in Mifflin County. Among other things they recently launched several vermin contests.

The York County Gun Club is preparing for a big celebration on Columbus Day, October 12. Field Captain D. Everett Moore, York, Pa., has announced a very pleasing program of sports. There will be archery, rifle and pistol events, skeet and straight trap shooting, fly and bait casting. The team trap shooting events for the championship of York County and other contests will attract many sportsmen. Programs are now being prepared.

The Shenango Valley Sportsmen's Association had a splendid attendance at the fourth Annual Picnic held at Todds Grove. Game Protector Frank L. Coen, and Lecturers Randolph Thompson and Chauncey Logue, represented the Game Commission.

The Ashland Fish and Game Protective Association is one of the most active sportsmen's clubs in Schuylkill County. It started in November, 1935, and to date has over 150 members.

Schuylkill County hunters and fishermen held an all-day conclave at Milen Park, near St. Clair recently at which several hundred sportsmen gathered. Delegates representing sixty clubs in that county were on hand. Dr. C. A. Mortimer, secretary of the Federation of Sportsmen's Clubs, urged the groups to become affiliated with the Federation. Other speakers were "Uncle Dan" Schable, State Fish Commissioner, Norman M. Wood and Chauncey Logue of the Game Commission, and Foster Robinson, well known local sportsman.



# HERE WITH THE SPORTSMEN

## LEHIGH SPORTSMEN HAVE FIELD DAY

Several thousand sportsmen from all over eastern Pennsylvania attended the annual outing of the Lehigh County Fish and Game Protective Association at Dorney Park near Allentown on Saturday, July 25, and witnessed a program that ran the greater part of the morning and afternoon. Nearly 200 anglers participated in the live trout fishing contest which took place along a 300-foot stretch of Cedar Creek, where over 1,000 brown and rainbow trout had been impounded and were fished for in relays of ten, prizes being awarded for the largest number caught in a ten-minute period and also for the longest trout caught during the afternoon. Louis R. Albright, Jr. of Allentown, won first prize for the most fish landed in his period. He caught eight, but it remained for Joe H. Mellon of Philadelphia, state fish warden, and Ernest R. Benninger of Bethlehem, to divide honors for the largest fish caught. Each caught a 21-inch brown trout, but the real trophy of the day was Mr. Mellon's 20-inch rainbow—a beautiful specimen.

F. A. Brown of Allentown, won the accuracy test in the fly casting contest with an average of 85, while Richard Wagner, also of Allentown, took the prize for distance with a cast of 63 feet.

Melvin Werheiser won the balloon shooting contest.

A big attraction at the outing was a fine display of mounted hawks and other birds contributed by the Game Commissioner and which was viewed with much interest by hundreds of spectators.

## GOVERNOR AT LAUREL FESTIVAL

Governor George H. Earle crowned the queen and gave a splendid talk before five thousand people at the Laurel Festival sponsored by the Jefferson County Motor Club held on the fair grounds, Brookville, July 1. Before he left he visited the big auditorium and paid a compliment to the heads of the various game and fish associations which had exhibits there.

## IZAAK WALTON LEAGUE PREPARES

The Southern Chester County Izaak Walton League, John Evans, president, Avondale, will stage its second annual field trial at Kaolin, two miles south of Avondale, Pa., Saturday, August 29. A committee is arranging for a very unique program. There will be running bear and deer, high power rifle shooting, small bore rifle matches, trap shooting, fly and bait casting and many other sports. The site on which the affair is to be held is ideal for the occasion. The Southern Chester County boys have been very active since its organization a few years ago in the restoration of game and fish.

There are now more than 36,000 wildlife organizations in the United States, their combined membership exceeding 7,000,000 people.

## CLUBS ADOPT GAME NEWS OFFICIALLY

The GAME NEWS has been adopted as the official organ of the Pennsylvania Trap Shooters' Association.

The Presque Isle Sportsman's Association has also designated the GAME NEWS as its official publication for the hunters among its membership, and the *Pennsylvania Angler* for the fishermen. This means of disseminating their own news and keeping in touch with the activities of other clubs is both wise and economical, and it is believed that many other sportsmen's associations throughout the State will eventually do likewise, especially since club rates have now been established.

## TROLLING FROM MOTOR-BOATS PROHIBITED

Under the rules and regulations for 1936 governing operation of motor boats on the inland waters of Pennsylvania, it is a violation to troll from motor boats on any of our inland waters.

The Board of Fish Commissioners suggests that where violations of this new regulation are observed, the case be carefully considered before bringing prosecution, inasmuch as this is the first year the ruling has been in effect.

The season for taking bass, pike, muscallonge, etc., opened on July 1 and the Fish Commission has asked the cooperation of all game officials and sportsmen in promoting law observance.

Below: Left to right: H. B. Kissinger, L. J. Jacobs, Alan Bare, Henry Ewing, Glenn Winget, and J. M. Reed, all members of the Midland Gun Club, with fine kill of bucks taken last season near Germana, Potter County. Two deer on right belong to another party.

Right: Large black bear killed by Weston Scaife, Barbours, Lycoming County.





## Attention All Clubs

Below are examples of the membership application forms of two well known sportsmen's associations. Note the various magazines offered with each membership, including the GAME NEWS and *The Angler*.

### PRESQUE ISLE SPORTSMAN'S LEAGUE

OF ERIE COUNTY, PENNA.

Member of Pennsylvania Federation of Sportsman's Clubs

Name \_\_\_\_\_

Bus. Address \_\_\_\_\_

Res. Address \_\_\_\_\_

Bus. Phone \_\_\_\_\_

Res. Phone \_\_\_\_\_

Presque Isle Sportsman's League Membership \$1.00

Choice of { ☐ Penna. Game News  
☐ Penna. Angler

I agree to abide by the Constitution and By-Laws of Presque Isle Sportsman's League. I promise to help this organization in any way I can, and to save and protect the fish and game of this Commonwealth by obeying the fish and game laws.

3453

Date \_\_\_\_\_

PRESQUE ISLE SPORTSMAN'S LEAGUE

OF ERIE COUNTY, PENNA.

Member of Pennsylvania Federation of Sportsman's Clubs

This is to certify that

IS A MEMBER IN GOOD STANDING

3453 W.C. Fletcher

SECRETARY

### Perkiomen Valley Sportsmen Association

Schwenksville, Pa.

\_\_\_\_\_ 19\_\_\_\_

I \_\_\_\_\_ hereby apply for

membership or renewal in the Perkiomen Valley Sportsmen Association of Schwenksville, Pennsylvania and remit as follows:

(Please check and give total amount)

- ( ) \$1.00 Membership dues.  
 ( ) .25 Junior Membership dues.  
 ( ) .50 for Pennsylvania Angler.  
 ( ) .50 for Pennsylvania Game News.  
 ( ) 1.25 for Field and Stream.

Total amount.

Name \_\_\_\_\_ Address \_\_\_\_\_

Occupation \_\_\_\_\_ Proposed by \_\_\_\_\_

RECEIPT

Received of \_\_\_\_\_

Address \_\_\_\_\_

\$ \_\_\_\_\_ to cover annual dues of the Perkiomen Valley Sportsmen Association, Schwenksville, Pennsylvania and for a year's subscription to Pennsylvania Angler, Pennsylvania Game News, Field and Stream.

Received by \_\_\_\_\_ Date \_\_\_\_\_

## WITH THE CLUBS

The Shenango Rod and Gun Club will hold its annual Field Day on Sept. 12. Twenty-five thousand persons usually take part in this gala event.

The Forest Protective Asso., of Southern Clinton County held its third annual Field Day on Aug. 8, at Long Run Park.

The Conewago Valley Small Bore Tournament was held at Elizabethtown on Aug. 8th and 9th. These contests are well attended and some high class shooting takes place.

By error the photo of the bear on page 20 of the July issue was miscredited. G. S. Bodine of Wellsboro took the picture.

## NOTICE

Let us know if your magazine reaches you safely each month. Some readers say it is often torn.

## "BRINGING THEM BACK"

Samuel Stewart decided he would not appear before the Sullivan County Court, April Term, to answer to the charge of assisting to conceal an illegal deer. Game Protectors Bob Latimer and O. M. Pinkerton, with the aid of the Court and a "bench warrant," decided otherwise. So these two officers proceeded to locate Mr. Stewart; and they brought him back to Court, where he not only paid a fine of \$100, but costs in addition amounting to \$52.45.

## COMING FIELD TRIALS

Sewickley Field Trial Club, Sewickley, Pa. September 19. H. H. Cahoon, Secretary.

Capital City Field Trial Association, Harrisburg, Pa. September 27. P. L. Reagan, Secretary.

Leechburg Field Trial Club, Leechburg, Pa. October 3. H. L. Fletcher, Secretary.

Beaver Meadow Field Trial Club, DuBois, Pa. October 3. B. W. Druckenmiller, Secretary.

New Kensington Field Trial Association, New Kensington, Pa. October 10. John A. Brown, Secretary.

Venango Grouse Trial Club, Oil City, Pa. October 31. Sam Light, Secretary.

Pennsylvania Field Trial Club, November 7. S. A. Magee, Secretary.

Lackawanna Kennel Club, Skytop, Pa. August 1. J. G. Horan, Secretary.

## CONSERVATION HEADS SPEAK

Dr. J. F. Bogardus, Secretary of the Department of Forests and Waters, O. M. Deibler, Fish Commissioner, and Seth Gordon, Executive Secretary of the Game Commission, were the principal speakers at a gigantic meeting of Erie County sportsmen recently. Over 2000 enthusiastic nimrods were present and participated in the launching of the Junior organization of the Presque Isle Sportsmen's League to which 66 boys were admitted to membership.

## NEW MUSKRAT TRAP

A muskrat trap that almost entirely eliminates loss of trapped animals by ring-offs was recently developed by a well-known eastern trapping company.

The result of carefully supervised tests made with these traps during the season of 1935-36 show 2075 muskrats caught with only fifteen ring-offs or less than 1%. The company in question believes that universal use of this type of trap would increase the annual catch of muskrats 25% without in any way decreasing the number of breeders left over for another year.

It also considers the trap a long step forward in efforts to produce a more humane trap.

## ROBINS DESTROY FRY

No doubt there are some hatcheries that are bothered with robins during their brooding season taking fingerling trout from the rearing ponds soon after they have been transferred from the hatchery. This can be easily overcome by placing red flags or red strips of cloth about the ponds. The flags should be 3 or 4 feet above the ground, so that they wave in the breeze.

I have seen robins take away as many as 6 No. 1, fingerling trout at one time and be back for more in less than one-half minute. As the old saying goes, "A young robin will eat its weight daily," and at this rate a brood of young robins will consume several thousand small trout during the few weeks they are fed by the parent bird.—R. P. Tanner, Lamar, Pa.





Q. Is there a bounty on water snakes paid by the Board of Game or Fish Commissioners?

A. Neither the Fish nor the Game Commissioner pay a bounty on water snakes. Some sportsmen's associations, however, have included the water snake in their vermin campaigns and in some instances pay a small reward for killing them.

Q. Is it illegal to sell bear or deer fat out of season for medicinal purposes?

A. It would be a violation of the Game Laws to sell fat taken from a bear or deer killed in a wild state in Pennsylvania.

Q. What is a good formula for making fox scent?

A. One pint of fish oil, one ounce oil of anise, one ounce oil of rhodium, and one ounce of pulverized asafoetida. Mix together in a bottle and shake well before using.

Q. Do pheasants ordinarily rear more than one brood of young each year?

A. No. No North American game bird, with the exception of the morning dove, is known to rear more than one brood per year regularly. Most upland species will lay two or more clutches of eggs, if the previous clutches are destroyed before hatching, but second nestings should be distinguished from second broods. More than one brood is extremely rare.

Q. Are Beaver properly called rodents?

A. Yes. They are gnawers, and the largest of North American rodents.

Q. Does the so-called ten-year game cycle involve any species other than ruffed grouse and rabbits?

A. Yes. All the grouse, some of the fur-bearers, and very probably many small mammals and some fish.

Q. Does blister rust spread from tree to tree?

A. No. Spreads from white pine to gooseberry and currant bushes, and then back to white pine.

Q. Do ravens occur in Pennsylvania?

A. Yes. But they are very rare. A few pairs nest in the remote forests, chiefly in the northern part of the state.

Q. Is a firearms permit good for fishing only? This question grew out of a dispute among gunners and fishermen, one of whom obtained a permit at the Court House which was marked to apply to fishing. The hunting privilege was crossed out. He contended that a permit once legitimately secured gave him a right to carry a firearm while either hunting, fishing or training dogs.

A. If a licensed hunter or fisherman has been issued a firearms registration



## ON THE FIRING LINE WITH TRAP AND SKEET

The Pennsylvania State Sportsmen's Association closed a very successful trap shooting tournament, week of June 27, as guests of the Bradford, Pa., Gun Club at which time the new club house, a beauty, costing \$10,000 was formally opened. Seth Gordon spoke at the banquet which followed the annual election of officers. Randolph Thompson, Game Commission lecturer, showed and commented on several reels of motion pictures.

Clyde D. Henline was reelected president, and Dr. Ramaley was chosen one of the directors to succeed a member who resigned. The next State shoot will be held in Shamokin, the dates of which will be announced later.

S. M. Crothers, Chestnut Hill, Philadelphia, carried off the honors for championship in the singles, while Mrs. Fred Hess, Boyertown, Pa., won the ladies' championship. Crothers also won the handicap shoot from the 25 yard line, stalemating with C. D. Henline, 95 all. In the shoot off Crothers went straight, Mr. Henline going down three in his last 25 event.

Fred Mullhaupt, the Bradford ace, and E. Murray, Sewickley, Pa., did excellent shooting, while Walter Beaver, Berwyn, high average man for the nation, was well up in the big scores, as was George D. Baldwin and Morley McBrayne, West

card by his County Treasurer, he would, in our opinion, have the right to carry the weapon described in the registration for either hunting, fishing or training dogs in season, at any time during the period for which the license mentioned on the card was issued.

Fishing licenses expire December 31 and hunting licenses terminate on August 31. The expiration date of your pistol registration will, therefore, depend upon the date the hunting or fishing license, under which it was issued, expires.

It is suggested that a person desiring to carry a pistol under the above registration also carry the hunting or fishing license under which the registration was made, so that both card and license can be inspected by an officer when necessary.

Chester. Bradford captured the five and two men team races. In the five man team the Chester County Rod and Gun Club was runner up. The Chester County Rod and Gun Club also won the two man team race.

Hospitality was the keynote during the entire tournament. One of the features of the tournament was the breaking of fifty straight in the doubles by "Mal" Hawkins, Camp Hill, pro. He also carried off the honors with the professionals in the various other events.

Messrs. Stenson, Dr. Vernon, Fred Mullhaupt, C. D. Henline, H. G. Hammer, W. B. Vernon, L. G. Danna, J. B. Eshelman, J. Neubling, Morris Leitzel, Fred Hess, John Genrich, A. Long, George Baldwin, and others helped to entertain the guests at the daily shoots.

Three ladies from Pennsylvania and one from New York State took part in the classics. Miss Betta Wister, Pennsylvania State woman champion in 1934 and runner up in 1935, Miss Joan Zerbe, woman champion in 1929 and Mrs. Fred Hess, incumbent, attracted considerable attention in their style of shooting, as did Mrs. C. E. Jackson, Stormville, N. Y.

O. Skidd, Wilkes-Barre, proved his prowess as a marksman.

J. A. Messimer, of the Quaker City Club, loves to shoot, and he, T. I. Carson, and N. Nicholas of the same club, gave splendid exhibitions of shooting.

Henry Winchester, assisted by W. V. Vernon, very ably conducted and cashiered the shoot.

Game Protector Carl Benson, Mt. Jewett, mingled among the sportsmen several of the days.

Mrs. Ralph Paddock, Syracuse, N. Y., New York State woman champion, was present, but not participating. Mrs. Paddock has participated in many notable tournaments in the States and at the Grand American tournament.

The new Pa. woman champion, Mrs. Fred Hess, says she will attend the Grand American classics in Vandalia, Ohio, this year.

But two charter members of the Bradford Gun Club are living. They are Dr. G. E. Benninghomm, and John W. VanTine. The club was organized in 1882.



# Boys—Dogs—Cameras—Bears

By William N. Martin

**S**EVEN boys (and an "older" boy) with duffle for a two-day trip into the northern woods, packed into a five passenger car the day after Thanksgiving. They had been brought to the place of assembly by chauffers or anxious mothers, who checked carefully the details of their safety and comfort. These boys of high school age were off on their first big game adventure. They were "armed" with four 16mm movie cameras, three snapshot Kodaks, new high tops, a reserve of questions, active imaginations, and duffle bags full of enough impedimenta for a week. Five hours of travel placed the group in one of the rugged frontier sections of Penn's Woods.

The two sons of the guides had promised to do their utmost to provide a bear chase and a real bear to be "shot." This was a big order for one day of hunting. Where could that order be filled? There was one corn field in the valley, surrounded by miles of unbroken, rugged mountains, and in that corn field the bears had eaten bushels of corn during the Fall months. Four big, young dogs—two English Fox Hounds, one Brindle Fox Hound and one shaggy Airedale—strained at the leashes as the two young Masters headed them toward the feeding grounds of the bears. The last hundred yards into the corn field was a riot as the boys tried to release the dogs.

"It's a chase already," shouted the boys as the heavy artillery of the four young dogs bombarded the valley walls. Across the corn field, yards apart, heads up and tongueing, the dogs charged the hillside. Straight up the long steep ridge went the chase with the four dogs running a dead heat. "That's music for a King." "Listen! —." "Treed!!" "They are barking treed!!" "I'll bet he is a big, old corn-fed pig, too fat for a long run." The second chase to leave the corn field within ten minutes was away for the ridge with the camera brigade of "softies from the city" bringing up the rear. The group approached carefully, two by two, while the young dogs tried to climb the large birch or chew it down to get Mr. Bruin. He sat in a large fork with his body close to the tree trunk. Occasionally he leaned away from the tree, looked down and snorted wildly his protests to the group below.

The day was very dark, and combined with the shade of hemlocks and the north slope of the ridge, presented unfavorable conditions for photographs on the ground. Hence, we "shot" the bear in the tree from many angles and in his varied poses. We sent an older boy up an adjoining tree and photographed the accompanying views. Meanwhile the dogs continued to broadcast to the trained ears of the old masters in the village below, and ere long the party increased to eighteen enthusiasts of the chase. One of the first to respond, despite

his game leg, had killed forty some bears in many seasons of hunting. Five others in the party had killed bears and deer. For the majority, however, this was their first experience with big game, and what a thrill.

"Let us put him down and see him run." Each moment was to suggest the next step, with safety and caution prevailing. The boys were placed on the rock ledge up the hill and the dogs were taken in charge by four men. Sticks and small stones were thrown at the three-hundred-pound black bear which was fifty to sixty feet up in the large birch tree.

Ordinarily a bear can be brought down easily, but this one refused to be disturbed. Not until a pole was directed from a nearby tree to his nose and feet did he move. Instead of coming down, he went up the



tree and out on the top-most limb. The limb bent and swayed under his great weight and we feared for his safety. As we held our breath that bear turned like a squirrel on that limb and returned to the trunk of the tree. This circus stunt drew a sincere applause of respect from the audience on the ground. Surely bruin is the acrobat of the woods. The pole was rattled against the tree trunk above him and soon he decided to go places.

"Look out!! He's coming!!" shouted the boy with the camera in the tree. The loose bark showered the writer as he pointed a movie camera up the tree trunk. The bear moved determinedly, hugging the tree loosely with his powerful front legs and looking to either side as he slid down the tree. Within twelve feet of the ground, he took off for a flying start as if to jump the gun in the get-away.

The four young dogs were released and a wild scramble started down the steep hill side. The Airedale grabbed the bear in the departure and steered him bodily into a big stump. The bear recovered him-

self quickly and struck savagely at the careless young dogs. They scrambled back out of reach and the bear took off down hill again. Within twenty yards, the dogs piled into the bear again and dogs and bear rolled and slid down the hill side together. The cameraman was hot on their heels, stumbling and falling as he tried to keep that stage framed in the finder of the camera. The bear stopped on his back against a fallen log and lay striking and biting as the dogs tried to wool him. The Airedale was too crowded for action and jumped onto the pile, landing on top of the overturned bear. Quick as a flash, the dog was in for the original bear hug and it appeared to be his last as he grunted his departing breath. The bear tried to finish him with powerful jaws and teeth, but fortunately the dog was embraced too close to the bear's neck to permit bending the neck for the bite. The dog was a promising, valuable dog, but the camera was too valuable to throw into the ring. The writer ran in to kick the bear when other man ran just past him and punched the bear in the ribs with a stick. The bear turned and released his shaggy vice sufficiently for the dog to rifle out of his grip. The bear jumped to his feet and ran to a nearby tree, panting as he climbed slowly to the first limb twenty feet from the ground. There he stopped straddle of the limb, with his hind legs dangling in the air, his front legs hugging the tree, and another limb between his teeth.

"Now is the time for pictures, boys! Bring him down while he is winded." Down he came as soon as disturbed, but this time not to run. He walked, stood on top of large flat rocks for several minutes at a time, turning first to one side and then another to face a dog. The dogs had organized themselves into a systematic, charging, escorting party. One camera was focused at ten feet and yards of film were wasted under the shade of hemlocks and cloudy sky.

The inspired following of boys and men crowded closer as the chase reduced its speed to the wish of the docile, panting bruin. After several hundred yards of such progress, the bear took to a hemlock tree, going up leisurely and perched himself twelve feet from the ground and watched the show on the ground. The boys were now brave bear hunters, and cameras clicked from every vantage point near the tree. "Tie up the dogs, boys, as this is an ideal climax to the day's sport." All the movie cameras were empty and only one had been reloaded during the chase. The group begged to see him run away through the woods rather than leave him up a tree.

This had been an excellent experience for the young dogs, although it may have proven fatal to some of them because there were too many of them, and they were ab-

(Turn to page 34)





NOT so long ago a group of sportsmen at a periodical get-together became embroiled in an argument as to what was considered the wildest, wariest, most adaptable and resourceful game bird in all North America. Now, then, there's an order for you. The wild clamor that the subject created by champions of various game birds finally simmered down to a field of two; the two factions presenting their points as clearly and soberly as a flushed jacksnipe. Of course, you have guessed the names of the birds singled for the main issues of this very interesting and unenlightening discourse. In case you haven't, they were the ruffed grouse and the Canada goose.

First, it should be borne in mind that under ordinary circumstances the Canada goose would not even be considered for any such argument by the majority of sportsmen. Not because it lacks desirable qualities, but because of the limited number who know anything at all about it. This group however, seemed to know all that there was to know and added some things that no one knows or ever will know.

Naturally there were some who championed their favorite game birds other than those discussed, and no amount of argument will ever cause them to change their minds concerning the various virtues of their respective birds. These few individuals were opinionated from the first and so their arguments were not considered, simply because the majority vote centered on the grouse and goose.

The accuracy of the entire discourse cannot be guaranteed simply because that at times it rankled with error. However, here goes—. One argument projected by an intrepid member of the grouse interests was to the effect that the Canada goose shouldn't even be considered a game bird. That flat-footed statement had the geese men up on their hind legs clawing the air wildly and contaminating it with their vituperations. After the excitement had calmed down, the

brazen one was permitted to come out from under a table and give reasons for such a preposterous and libelous accusation.

"Well," the culprit flaunted defiantly. "The goose is so doggone wary that it doesn't give the hunter a sporting chance, whereas the grouse sometimes holds his cover until nearly walked upon. There's sportsmanship for you!"

"So doesn't the woodcock," taunted the geese men. "That places the grouse in a class with the woodcock, and is that bird wary—as wary as a wooden stool." At this a number of woodcock champions were nearly stricken with apoplexy.

"Now, as to resourcefulness," yelled a red-faced bulbous nosed fellow, "the grouse can't be beaten. What is the first thing that it does upon being flushed?" he roared. "I'll tell you," he quickly continued. "It puts a good big tree between its tender hinder portions and the gunner."

"You nit wit," yelps a staunch waterfowler. "The only reason why a goose doesn't do that is because there're no trees handy."

Suddenly, an imposing individual jumped on to his chair and in a loud and not wholly unpleasant auctioneering bellow demands attention and silence. From his height he glanced covertly at the group of waterfowlers who because of a common interest had become localized in one corner of the room. On the other side were the grouse glaring balefully at their opponents.

"Gentlemen," he opened. "The only way by which we can arrive at any satisfactory conclusion is by sober thinking and orderly argumentation. So let us conform, at least in bare outline, to the decorum of parliamentary law in the conduction of this meeting." There followed a roar of acclaim. Command-

ingly, the imposing man raised his hand and again there was silence.

"If everyone agrees to it I will take charge of the meeting and from now on remarks pertaining to the birds under discussion will be addressed to me. Agreed!"

"Yea," came the thunderous response.

After another impressive pause he continued. "Gentlemen, I know that everyone in this vast and intelligent audience will agree with me in that my timely action, and the type of leadership exhibited has turned chaos into order." He stopped and glared at the grouse although he was supposed to be addressing the house. The grouse were at the edge of their chairs, heads cocked and every sense alert. Suspicion, doubt and uncertainty were on the faces of every loyal supporter of *Bonasa*.

A tense silence pervaded the room. The self-appointed chairman seemed to stretch himself several inches taller, to become even more impressive and dominating. His voice changed to a roar.

"Leadership, that sterling quality that makes for peace, that reduces panic, that rules mankind—in fact, dominates everything. What would we do without it?" he asked in a throaty scream. The collected assemblage looked dubiously uncertain, expressions of bewilderment clouded many a face. Some went so far as to point a rotating finger at their heads.

"Then, you all agree with me that leadership is the most essential quality for the success of every earthly enterprise? Surely, there is no one here who will refute that?" he roared, sweeping the room with his eyes and finally settling a distinctly hostile glare on the innocent group of grouse.

"Yes suh," his voice soared to unprecedented heights in a racuous howl. "Leadership as exemplified by the wildest, wariest, most adaptable and resourceful bird that flies—the CANADA GOOSE."

It took the grouse fully ten seconds before they realized the full force of the colossal subterfuge played upon them. The geese men roared their approval and hailed their champion. That worthy had now discreetly and hastily descended from his exposed position for he knew full well that many in that assemblage of sturdy grouse were good wing shots. Even now the latter were armed with any bit of miscellaneous furniture that they could get their hands on.

To the geese men's amazement the grouse silently and orderly went into a huddle. A conference of a minute or two followed, and then from the group there issued a spokesman.

"Brother sportsmen and goosers," he began. "We agree with every point projected by your illustrious representative. He illustrated most admirably, and to our entire satisfaction I must add, that any *goose* can be a leader when those led are nothing but a bunch of geese."

You've guessed it. The meeting ended in a riot.

## "Sauce for the Goose--."

By N. R. Casillo



## THE AMERICAN PHEASANT

(From page 5)

America. Today chickens are scarce, but some of them boast as many ringnecks as they used to have prairie chickens. Minnesota, one of the greatest duck states in the Union, in 1931 killed only 518,000 ducks, but had a total kill of over 1,000,000 cock pheasants.

Anyone who has never hunted pheasants in these Prairie States has no conception of the almost bewildering numbers of birds which are to be found in many sections. Ethan W. Thompson, who hunted in South Dakota last fall, says (*The Northern Sportsman*, March, 1934): "Wherever there is a cornfield there are birds galore. Seven of us went through one cornfield of thirty or forty acres, and when we reached the end over five hundred birds took wing. Fourteen men at the end of the drive bagged over thirty birds. In another ten acres of canebreaks we flushed over three hundred birds. Never were we over two hours securing all the law permitted, five per day, shooting being permitted in the afternoon only to make the sport more difficult." The limit for the season in South Dakota is 25 pheasants.

Last fall, August Maier of Linton, South Dakota, killed a banded cock pheasant that was one of the original birds released in 1913, a wise old fellow with a charmed life that escaped for twenty years. This proves that the pheasant is not such a dumb-bell as many people think.

Aldo Leopold, in his game surveys, found that in the Middle West pheasants rarely average more than one bird to the acre, and quite often, even in good pheasant-hunting territory, not more than one bird to every three to seven acres. In one county in northern Iowa he found 1,000 pheasants on 320 acres, an exceptional case, just as was an area in Ohio where 140 to 210 birds were flushed from a patch of twelve rows of corn about 400 yards long each time it was visited by investigators.

In several marshy sections of New York and New Jersey adjacent to farm lands, very heavy winter concentrations of pheasants occur, but one estate in eastern Pennsylvania—about 1,400 acres of farm land, brushy ravines, unmown hayfields and woodlots—boasts the heaviest concentration yet recorded in the East. In 1932 on that estate 1,500 eggs were salvaged ahead of the mowing machine by using a flushing device while cutting 123 acres of alfalfa. That winter, over 1,800 pheasants lived on that property. The following spring, around 1,200 pheasant eggs were salvaged, and during the winter of 1933-34 the pheasant population was estimated at more than 2,000 birds.

All the territory around this estate is excellent pheasant country with plenty of birds, but heavily hunted, while on the estate hunting is limited to about 150 birds annually. The real answer is favorable food and cover, with ideal nesting and range conditions.

On this property the corn crop is harvested exactly as it is in Illinois, Iowa and South Dakota—from the stalk without cutting. If the farmers of the East could all be induced to harvest their corn crop in

the same way, there is every reason to believe that in corn-growing sections, especially where there are ungrazed marshy ravines and uncut hay and weed fields adjacent thereto, pheasants would become as abundant as they are in South Dakota.

Prof. H. M. Wight of the University of Michigan has devoted more time to studying the environmental needs of ringnecks than any other man in America. Speaking of southern Michigan, he says, "Although we cannot hope to develop a pheasant population equaling that of certain sections of South Dakota, Iowa and Minnesota, where vast cornfields are left standing throughout the winter, the present population can be greatly increased by the adoption of improved management practices."

On a demonstration area there, Professor Wight increased the pheasant population over 400 per cent within two years by proper cover and food management. The American Game Association, Washington, D. C., will gladly tell you how Professor Wight achieved this remarkable result.

Experiments with ringnecks in the Southern States have always been discouraging. Virginia, for example, released 2,200 birds in 1917. In the report of the Game Commission the following spring it is recorded



that "The live pheasants liberated in the fall of 1917 suffered severely from hawks during the protracted snows of the winter (1917-18), and the reports coming in are very discouraging. To establish the ringneck as a game bird in this state would take years and constant restocking until it acquired the shrewdness necessary to cope with its natural enemies."

Since pheasants thrive in states where snow lies on the ground for months at a time, there must have been some other reason for the failure in Virginia. I am inclined to suspect that the birds were scattered over too much territory, and that the ground cover was not dense enough for them; also, that pheasants should never be expected to thrive in a country where dark huts dot the landscape. They are too near the size of chickens.

Last fall, Dwight L. Armstrong of Pennsylvania, told me about a pheasant experiment which he and some friends made in Georgia, near Warm Springs. That is an excellent quail country, about the only farming being patches of cotton, cowpeas, corn, and in some instances wheat, grown by negro tenant farmers.

"My theory was that perhaps pheasants raised in the South would be better for stocking purposes," says Mr. Armstrong. "So early in 1929 ten hens and four cocks were shipped to one of my friends in Georgia. He had very little difficulty in rearing the birds, and that fall released about 275 grown birds. He put out another 150 in 1930, and a few more in 1931.

"They strayed all over the countryside.

Lately they seem to have disappeared entirely. The climate may be unsuited to pheasants. There seems to be plenty of the same kind of cover we have here in Pennsylvania where pheasants have done very well.

"In that section of Georgia there are a good many gray foxes; the pheasant is a good-sized bird and relatively easy meat for the negro hunter; and probably we did not continue our stocking operations long enough. On the other hand, there is not anywhere nearly as much grain, such as corn, as in Western States where the pheasant has thrived."

It is very evident that a lot more research work should be done before more pheasants are stocked in the Southern States, where the bob-white is king.

Apparently there is no state in the Union where pheasants have not been released, either privately or publicly, and they are now being stocked in a number of Canadian provinces, where reports indicate that they are getting nicely started. Pheasants have become firmly established in not less than twenty-seven states, and in at least twenty of these the gaudy foreigner is destined to furnish a major part of the upland wing-shooting of the future.

Not only is the ringneck game unto death, but his popularity is growing rapidly. In many sections of the country he has served as a shock-absorber par excellence for our native game birds. If he continues to grow in favor, and our duck supply continues at a low ebb, thousands of duck hunters may turn to ringneck shooting.

As a table bird, the Chink is a most delectable morsel. I'll take a juicy ringneck on the table any day in preference to grouse or quail. And that is another reason why he is gaining in favor.

Little did Judge Denny realize that within a half century his purchases of pheasants in a Shanghai market would inspire such nationwide interest, or that they would furnish so much pleasure to hundreds of thousands of American sportsmen.

## DO THEY OR DON'T THEY?

(From page 11)

deer; dogs nursing and rearing pigs, sheep, rabbits, foxes, lion cubs, bear cubs, raccoons and even cats; cats in turn to nurse and rear rabbits, squirrels, foxes, skunks, badgers, coyotes, and believe it or not, even mice.

In the bird world, especially the domestic, it is not uncommon to hear of bantam hens which mother young ducks, geese, turkeys, pheasants, quail, et cetera and I know of a case where a prairie chicken hatched and reared a brood of partridges.

Song birds have also become foster mothers and I know of a starling which reared her own brood and a brood of Robins; a Towhee which adopted a family of Slate-colored Juncos; a pair of English Sparrows which raised a brood of Bluebirds and a Chipping Sparrow which adopted young Cowbirds. Incidentally it is true that the Cowbird makes no nest but deposits her eggs in other bird's nests, therefore the little Chipping Sparrow mentioned above had to do or else.



# The Hunt

By DONALD J. ANDERSON

FROM the north, menacing purple-black clouds brought a sharp cold wind. The wind that gripped my faithful old twelve gauge cannon was numb with cold. But I didn't mind. We were entering the woods now and I was confident we'd bag some rabbits there.

Davey Krauss, a one armed man who is as good a shot as most men are with two hands, disappeared into the forest first. Hallman and his bird dog "Spot" followed. Lastly, Rich Scholl and I, the two least experienced hunters, waded into the thickets. Davey's rabbit hound, "Jack," a veteran on the field, was sniffing around beside us.

We had hardly been in the woods ten minutes before the light drizzle which was to annoy us the remainder of the day began to fall. We forgot about this however when a ruffed grouse flew up within range of Hallman. His gun boomed but the grouse didn't wait long to hear it. He ducked the chasing pellets and winged his way out towards the north, where he landed in a field.

This put us all on guard. We waded on through the brush, numb with cold, but with high hopes. The twigs slapped against our half frozen hands and faces, which didn't feel pleasant.

Jack's rabbit yelp startled us. We hastened to spots where a shot was possible and remained perfectly still. Dead leaves rustling on the forest floor and the wailing wind were all the sounds to answer the howl of the trailing dog. Spot did what he is trained to do when Jack barked—lay down and remained quiet beside Hallman. There is no greater nuisance when a rabbit is on the run than a wandering bird dog.

Hallman and Davey each got poor shots at the rabbit and they missed. So Hallman took Spot in a little clearing in the woods while Davey "fed the trail" again to Jack. In the clearing Spot pointed. A ringneck flew up and Hallman brought him down first shot. But we didn't have time to talk long. Jack barked again.

This time we were not long in waiting. It was hardly fifteen minutes before a gun cracked and Hallman called. "All right," which meant he had bagged the bunny. We struggled through the briar and brush to where he stood, thinking it time to have a confab. We talked and took chews of tobacco (never do we smoke during Autumn, for fear of starting a fire) and watched Hallman gut his rabbit. Then we struck out over the mountain. It was a tough ascent and the underbrush was at times nearly impenetrable. Hallman, the stoutest of the group, panted and wheezed. The rest of us weren't any too fresh either, when we reached the top. Here, standing on a bluff in the opening of the forest, we rested and admired the scenery. It still looked like storm in the north. Massive banks of cloud rested on the rough horizon. After a time Davey said, "Now we'll hit out around the side of the mountain and see if we can scare up a few rabbits."

But Jack changed our plans by yelping in a narrow gulley to the west. We chose our stand and again the leaves and the wind held sway over the forest. By this time my hands were beyond feeling. They were so cold I had practically no control over them. Rich had his stand near mine and he held a match under his fingers to prove they were cold.

This time we had long to wait. So long in fact that Rich came up and sat down on a stump beside me. We talked in restrained tones. Hallman and Davey had moved down the valley to get a better stand. We were alone. Rich began wishing for a pair of gloves but my stomach told a different tale. I got a banana out of my pocket and nibbled on that.

Suddenly Rich slipped off the safety on his gun and tried to guide his numb fingers to the trigger. An instant later a large mountain rabbit came bounding through the brush. I aimed as best I could and pulled the trigger. Bang! My Big Bertha boomed. The rabbit took a long skyward jump and fell over on his side. A few minutes later Jack came whelping through the brush. I held up the rabbit and he immediately went into the brush in search of Davey. "All right," I called and Davey and Hallman were soon in sight.

In a short time the hunt was in full swing again. Rich kicked up a rabbit but couldn't get a shot. Hallman left fly and thought

he hit it. Jack was put on the trail and he went to a hole under a rock and began to dig. We waited but the rabbit could not be located.

By this time it was late afternoon and was getting colder every minute. But Davey wasn't ready to quit yet. An old veteran like him going home empty handed. The horror of it! He led us through the thickets again. A rabbit bounded up. His single arm lifted. Just as he was about to fire, the rabbit holed up. What Davey said need not be told in print.

We didn't see any game then for at least a mile. Then, while crawling up a steep bank a ringneck came flying across the ravine. "Ringneck!" someone shouted. Quick as a flash Davey turned and brought down the pheasant from a mighty difficult angle. It was a magnificent shot. I ran back down the ravine and up the other side to the spot where it fell. A few feathers, mused up leaves where it had fallen, and that was all. Hallman called Spot but the dog didn't pick up the trail. Davey sat down on a stump. "Let's go home," he said. "I'm disgusted."

I pointed to where the bird had fallen. "It should have stayed put after that fall..."

Out on the road again with a hard day behind. The woods were a long darkening stretch of gray and sheets of mist partly obscured the mountain summit. The dogs sat beside the car with their tongues hanging out. We quietly removed the cartridges from our guns. Davey spoke the last words before we departed for home: "Well, Jack, we have nothing ourselves tonight, but you deserve a good meal, anyhow."

## DR. NATURE

That person is to be pitied, who, when alone in the great outdoors of Penn's Woods, finds himself in poor company.

If the doctors told me I had but twenty-four hours to live, I would arrange to spend a portion of that time communing with God's children of the forests.

Much has been said and written about the care of our physical bodies, but it is just as essential to have a proper diet for that spiritual part of us. There is an abundant supply of food for our souls to be found on the most barren hill-top or rocky cliff, but we must not look with half closed eyes or the real beauty of nature will never be seen.

What the average man needs today is the ability to see the beauty in the rain drops, snow flakes, the flowers and anything that has to do with nature. Mr. Worried Business Man, you can be cured of your ills, painlessly and pleasantly by taking a heap-dose of Dr. Nature's Cureall treatment.

Several years ago I was engaged in a business as an agent and many times afflicted with the blues. I had several different treatments that cured me each time. The one that took effect quickest was a visit to one of Fulton County's few colored men, namely, Mann Lane, who at that time was chiefly distinguished as the owner of the best pack of hounds in that mountainous country. So long had Mann followed his dogs that he interpreted the various modulations of their barks and growls as

language, indicating certain definite stages of the chase.

One evening at twilight, after an unsuccessful day for me, I drove to see Mann. He was just finishing his evening chores when I drove in. Jumping out of the car to shake hands, he met me with a smile. After receiving a hearty welcome, I asked him whether or not we couldn't have a chase. At my request, Mann whistled and the pack assembled. Old Tom came out of the dwelling house, Buck from the woodshed, Lead from the barn, Bingo from around the straw-stack, and several others from the wagon-shed. Mann gave the signal and they were off for a hunt. Mann and I perched ourselves on the wood-pile to await developments.

The wait was short. At the upper edge of an old mountain field the whole pack began to tongue. Mann had a troubled expression on his face. "What is that, Mann?" I inquired. "That," said he, "is no fox. It ain't a rabbit, it ain't a cat and it ain't a squirrel. I never heard 'em tongue like that before." All the while the chase was getting closer to us. Lo and behold, they were bringing it up the lane behind the house. It was one of Mann's mules with his ears laid back and tail outstretched. He was in high gear. Into the barnyard he went and when he attempted to stop he slid half-way across the wet barn-yard. Was I cured of the blues? Completely! My soul had been fed.

—Game Protector W. W. Britton



# MISCELL

## ALARMING DECLINE IN CANADA GEESE

"Hunting wild geese of the various species which migrate across the settled portions of the country is mostly a thing of the past in Canada," according to Hoyes Lloyd, supervisor of wildlife protection, National Parks of Canada. The breeding of Canada geese has practically disappeared from the settled parts of Canada, though the arctic and sub-arctic regions are still the nesting grounds for many kinds of geese.

"There has been a serious depletion of geese and brant in the Maritime Provinces, where eel-grass conditions show little improvement.

"Good breeding conditions on the Canadian nesting grounds will not," in Lloyd's opinion, "provide an adequate waterfowl supply for the continent. The southern prairie section of western Canada will never, because of agriculture and other interfering factors, hold again the position it once held as a waterfowl nursery. As for the remaining breeding territory of importance farther north, it is a question as to whether that area is not working at capacity now. As the demand will always be as great as, or greater than, the possible supply, the utmost caution must be exercised in safeguarding the waterfowl remaining."

Buffalo twins, both heifers, were born in Highland Park Zoo, Pittsburgh, Pa., this season. A comparatively rare happening.

## A FIVE HUNDRED DOLLAR CROW

Imagine, if you can, collecting five hundred dollars for shooting one single crow. Yet it can be done, but only by a resident of Saskatchewan. And there are 855 other crows with thirty-five hundred dollars in all on their heads. W. F. Kerr, Minister of the Department of Natural Resources of Saskatchewan recently announced a province-wide campaign for the control of crows and magpies. 856 of these big, black fellows were trapped, banded with numbered bands and released in all parts of the province. Just that many crows are now at large ransacking duck nests and comporting themselves in true crow fashion but in addition, are dodging prize seekers. Every one of these crows is worth money when he's taken.

One is worth \$500; five are worth \$100 each; ten are worth \$50; twenty are worth \$25; forty are worth \$10; eighty are worth \$5; seven hundred are worth \$1.

This ought to be incentive enough for enlisting the cooperation of every able-bodied man in the province in controlling the hordes of crows reported to be invading the waterfowl breeding grounds of the prairie provinces. It ought to reduce materially the number of these marauders in this region, and be productive of more ducks.



Thousands of eggs of waterfowl, gulls, terns, and upland game birds destroyed by crows

## TRY THIS ON YOUR OLD CROW CALL

We have heard and heard of different artists on the crow call and we are quite willing to award the palm to Game Protector Troy C. Burns of Butler County.

Protector Burns selects a large dead snag surrounded by smaller growth and hides where he will have green branches over him. His first call is that of a mother bird being disturbed and a "scout" is generally in pretty quick. At this juncture the call is switched to that of a young crow in trouble and is surely realistic. The "scout" crow is back in a few moments with "the gang" and the fun begins. By shooting only at crows that have alighted he is able to make clean kills. A crow that is hit but not downed will cause the entire flock to leave.

Several days ago Game Protector Burns and Traveling Game Protector George Norris were called to Mercer Township by a report of dogs running deer. Arriving too soon for the dogs the officers decided to spend an hour or so at crow killing. Mr. Burns got hidden with Mr. Norris about 25 yards away near a big dead snag. The young crow call had scarcely been given when Norris heard a patter of feet and was surprised to see a fox sneaking up on the "crow." She would sneak up while the call was on and then "freeze" until the next call. Protector Norris put a load of number 4's where it would do the most good and Mrs. Fox will eat no more grouse or rabbits. You have to be plenty good to fool a fox. Game Protector Burns is an artist and no mistake at this mode of deception.—Dr. Bernard D. Hetrick.

## NEW ALLOY FOR GUNSHOT LESSENS DANGER OF WILD DUCK POISONING

Wild ducks often escape hunters' gunfire only to be poisoned fatally by lead shot which they eat in dabbling for food in marshy areas. Waterfowl losses from lead poisoning are common, and many ducks die from eating only 4 or 5 lead pellets.

The slow, toxic action of the lead first causes ducks to lose their power of flight, and then their ability to swim or walk. In this helpless condition, even should they survive the ravages of poison, the birds are likely to become victims of the elements or of predators. The Bureau of Biological Survey called attention to this waterfowl menace in 1919 and pointed out the hopelessness of any remedial measures.

However, the outlook for preventing lead poisoning of waterfowls is somewhat brighter now. By mixing lead and magnesium, scientists of the University of Minnesota and of the Biological Survey have developed an alloy that disintegrates in water, or if it is eaten by waterfowl, breaks up rapidly in the gizzard and passes through the intestinal tract before a fatal dose of lead can be absorbed by the bird's body. Ordinary lead shot when eaten by waterfowl are trapped in the gizzard and gradually are ground away. This finely divided lead absorbed by the duck's body as it passes through the intestine produces the poisoning. When the new alloy has been developed to the point where its use by shot manufacturers will be practicable, the scientists believe, the dangers of lead poisoning will be greatly decreased.



# NEWS

## DUCKS

American duck scouts have been on the job in Canada for weeks, comes a report from Fredericton, New Brunswick. At first hand they are studying nesting and food conditions in the waterfowl breeding area throughout the Dominion for the purpose of securing adequate information on the duck crop on which to base the shooting regulations for the coming open season.

No hint of what these regulations may be has been offered by the Biological Survey but preliminary reports from the duck scouts intimate that conditions are no worse than last year. Indeed, in the Mississippi flyway up to the time the drouth struck there was even a hope of a slight improvement. The Atlantic Coast and other flyways are less immedi-



ately promising. Mallards and pintails, as usual, lead the recovery march, with redheads, canvasback and other divers well to the rear.

The Survey's current restoration program is only about half completed. But with some 1,500,000 acres of waterfowl habitat already acquired, the work that has already been done, combined with the shorter seasons and more rigid restrictions during recent years seem to be taking hold in the desired manner. While slight improvement is apparently indicated in one region, the time is yet too early to relax. Belts must still be kept drawn tight and "iron rations" of waterfowl shooting must be the order for another year or two at least. By then, it is fervently hoped that waterfowl generally will have "come back" to the point where they may maintain themselves in adequate numbers under less rigid and niggardly shooting regulations.

In the meantime duck stamps are on sale.

## WILDLIFE TREATY WITH MEXICO

### New Law Reinforces and Extends Federal Authority over Birds

Federal authority over migratory birds was reinforced and extended by an Act of Congress approved Saturday, June 20, by President Roosevelt.

Federal authority over migratory birds has heretofore depended on the Migratory Bird Treaty with Great Britain. The new treaty reinforces this authority by providing for a dual basis for the Federal regulations conserving ducks, geese, and other migrants.

The Mexican treaty also provides for Federal protection of several species not specified in the agreement with Great Britain. These species include horned larks, blackbirds, grackles, cowbirds, mockingbirds, thrashers, phainopeplas, buntings, finches, and sparrows. Many species that cross the Mexican border do not reach Canada. Provision has also been made in the new treaty for the future inclusion of other migratory species "which the Presidents of the United States of America and Mexico may determine by common agreement."

The treaty with Mexico also provides that game mammals, as well as migratory birds, may not be transported, dead or alive, over the Mexican border without a permit from the government of each country.

Other provisions of the agreement with Mexico include the limitation of migratory-bird hunting to a maximum of 4 months, under permit; closing the season on ducks in both countries from March 10 to September 1; and establishment of refuge zones in which the taking of migratory birds will be prohibited.

Following ratification, by both countries, the new convention "shall remain in force for 15 years and shall be understood to be extended from year to year if the high contracting parties have not indicated 12 months in advance their intention to terminate it."

The National Skeet Shoot will be held at St. Louis, September 14-19.

A good thing to remember and a better thing to do is to "Work in the construction gang, and not the wrecking crew."

## NEW LITERATURE

Disintegration of Lead Magnesium Alloy (new type of Bulletin) in the Gizzards of Ducks—R. G. Green and Ralph O. Dowdel—Obtainable at the Biological Survey, Washington, D. C., at no cost.

External Parasites of Birds from the Eastern part of the United States—Harold S. Peters—Bird Banding Bulletin; January 1, 1936—Published at 95 South Street, Boston, Massachusetts; price 50c.

"The Pennsylvania Park News" is the title of a splendid little bulletin outlining the recreational facilities of Pennsylvania's wilderness areas. It is published by the Pennsylvania Parks Association with editorial offices at 35 North Sixth St., Philadelphia, Pa.

The Pennsylvania Historic and Scenic Commission with offices in the North Office Building, Harrisburg, Pa., has recently issued a recreational map of Pennsylvania which will be of value to anyone interested in the outdoors.

## PIONEER BIRD BANDER ACTIVE

It is a well-known fact that Jack Miner is a pioneer in tagging birds in Canada. He tagged his first duck in August, 1909, at Kingsville, Ontario. That duck was reported killed in January, 1910, in South Carolina.

He had to invent nets and contrivances to catch the various species he has tagged. That, in itself, was a task that demanded no little ingenuity and entailed no small expense.

To date he has tagged over fifteen thousand Canada geese. This past spring he made seven or eight catches, which totalled over twelve hundred in number.

These tags furnish invaluable information to the scientists, naturalists and game



protective departments concerned in the study of the life, habits and migration routes of our birds. The authentic data so secured is used not only in the universities of the continent, but also by Federal, State and Provincial Governments in both Canada and the United States. Such records demonstrate clearly where the largest percentages of migratory wildfowl are killed.

Each tag put on bears Jack Miner's name, post office address and the date, while in one corner is also stamped a selected verse of Scripture, this being Jack Miner's unique way of passing along God's word to the people who shoot this coveted game bird.

Each of the twelve hundred tags put on this spring carried such a Scripture message, so that Jack Miner calls them his "winged missionaries."

An alert herd of deer snapped by an enterprising newspaper photographer

(Photo Phila-Inquirer)







Smith's Knob, Refuge No. 8, Lycoming County

## A PHEASANT A DAY FOR THIRTY DAYS

Broiled pheasant a la Maitre d'Hotel: Roast pheasant a la Jailhouse: Pheasant fricassee du Brig: Or Pheasant as you like it, stewed, baked, boiled, or fried: Such is the fare of game bootleggers incarcerated within the hospital walls of Sheriff Roehr's gaol at Britton, South Dakota.

The Sheriff conceived the idea of giving such prisoners a real taste of what it means to violate state game laws. So when two men, Byrnes and Russell, were apprehended in the company of 118 ring-necks which were heading for Minneapolis hotels and restaurants, he purchased fifty of the confiscated birds. These he detailed to the prisoners mess and decreed that thereafter as long as the supply should last, these men have pheasant to order, daily, three times!

The idea is good. Too good. A steady diet of pheasant meat should so sicken such men of birds that they'd never want to see one again. But it should be served RAW with feathers and viscera—not to order.

## MANY LICENSES

The figures from the United States Bureau of Fisheries show an increase of 265,375 anglers' licenses last year over 1934, and a corresponding increase is expected this year over 1935.

The figures show 5,121,320 fishing, and combination hunting and fishing licenses were issued with a revenue of \$7,009,009.10. The total number of fishing licenses (regular, alien and tourist) issued amounts to 3,187,358, with a revenue of \$3,672,832.68, while the total number of combination licenses equals 1,933,962 with a revenue of \$3,337,098.92.

The total revenue for resident licenses was \$6,023,023.68, and for non-resident licenses \$986,907.92, while the total number of resident licenses issued was 4,710,771, and non-resident, 410,549.

There were 6,421 alien licenses issued (resident and non-resident), and of this number 441 were combination hunting and fishing licenses. The total revenue from the sale of these licenses amounted to \$34,175.30.

There were 116,488 tourist licenses issued, and the revenue from their sale amounted to \$127,474.10.

## THE N. Y. A. IN CONSERVATION

There is one Federal agency working in the interests of wildlife conservation within the State of Pennsylvania which is not being taken advantage of in many sections of the State as much as it should be—the National Youth Administration. This Federal project, with units in every county of the Commonwealth, is comprised of boys ranging from 16 to 25. The units are so located geographically that they can be worked into almost any kind of wildlife management program.

As an outstanding instance of the manner in which one particular group of these boys has so ably assisted local game officials I am citing the activities of the unit from Adams County now under the supervision of Walter M. Preston of Fairfield.

This unit, working in conjunction with local sportsmen's associations, built 175 feeding shelters last winter and erected 37 combination feeders and shelters.

As spring approached they turned their activities to forest fire protection, forestry and game food plantings. Still later they made a canvass of all the farmers throughout the county in an effort to get them interested in using the flushing bar. They also made an extensive game census throughout the year. (The figures for which are at present in the possession of the unit in question.)

Mr. Preston, the Supervisor, said they located 112 coveys of quail, three to seven in a covey. They also assisted the Game Protector in stocking wild turkeys and taking care of them after they were released. The boys are now trying to get farmers to let corn and other grain stand to provide game food and cover this fall.

A new program which they contemplate within the next few weeks will comprise a school wherein boys from 16 to 18 will be taught all about the game, fish, and forest laws, the dog laws, proper use of handling firearms, trapping, etc.

The McSherrystown Fish & Game Association has agreed to enlist several hundred students in case the school project assumes a successful proportion.

**First hunter excitedly: "Just met a bear in the woods."**

**Second hunter: "Fine, did you let him have both barrels?"**

**First hunter: "Both barrels," he bawled, "I left him the whole gun; you can't run all weighted down."**

A pure white buffalo, one of the rarest of animals, is a member of the large herd of bison in the National Bison Range, Western Montana. According to authorities an albino buffalo calf occurs about once in a million births.

## NOTICE

We want to know if your magazine reaches you each month in good condition. A few readers say it is often torn or otherwise disfigured.



## MAKES GROUSE STUDY

L. S. Gross, Forest Supervisor of the Allegheny National Forest, made an interesting informal study of the nesting and breeding of the ruffed grouse in that area during 1935.

The information obtained was based on rather limited data, since the nesting season had already started before Mr. Gross' investigation got under way. Nevertheless, it has already proved valuable in planning future study in grouse management work.

### Thirty-five nests studied

Observations were taken upon a total of 35 nests. The number of eggs present in the nest at the time of hatching varied from one to sixteen, the average being ten. Only one egg out of the clutches examined after hatching was found unhatched. While it is possible for unhatched eggs to be broken or eaten shortly after a brood has left the nest, a high percentage of egg fertility on the Forest is indicated. The study did not make it possible to determine the eggs lost from predators; however, the number of eggs present at the time of hatching and the percentage of fertility gives the increase for any given season, which is the significant figure in wild grouse management.

The earliest nesting date was April 21, the majority of nests being started the last week in April, while the latest recorded hatching date was June 10. This would make the nesting season about seven weeks in length, with the middle of May being the time when the maximum number brooded.

### Predators

Since the grouse is a ground nesting bird, nest depredations are frequent. Fifty percent of the nests observed were definitely known to be preyed upon, and nearly one half of this percentage were completely destroyed. Predators usually returned to the nest until all the eggs in the nest were finished, if not destroyed at the first visit. It was found that repeated observations did not necessarily show the number of eggs laid, since if 14 were in the nest one day, another might be laid later in the day and stolen that night, but the total the next day would still be 14. The kind of predators responsible for egg losses were crows, skunks, and chipmunks. The latter have a peculiar habit of removing the eggs unbroken from the nest and hiding them a short distance from the nest.

### Nesting Sites

Over 90% of the nests were found at the base of a tree (or stump) or on the underside of a log. Other sites included piled brush and hemlock reproduction. It seems to be instinctive for the nesting bird to have some protection over her while sitting, yet it must be open enough to allow a quick get-away if danger threatens. This information on nest location, however, does not present a true picture because very little work was done by field men in slashing last spring. It is reasonable to believe that such areas are very good, because they combine the advantage of piled brush for nest sites and open ground for feeding.

## Summary

The average survival of the seventeen broods, on which it was possible to obtain continued observation, was 5.6 birds, with variations from one survivor to twelve. So far, no successful plan of artificial raising of grouse on a large scale has been perfected. We still must depend upon the fluctuating natural reproduction of these birds, and therefore, it certainly is to the advantage of all concerned to know more about the natural nesting and growth of broods. Annual observations are indicative of the trend of grouse population. Preliminary studies this year are not so encouraging for the hunting season this fall. In comparison to last year, if these studies are indicative, there will be relatively few birds this season. Some of our best nesting areas are producing but very few broods. One area which last year produced seventeen broods, is not producing a single brood this year.



## NOTES

Dr. Charles Elton and G. Synnerton, in an article in the Canadian Field Naturalist, make some interesting reports on the fluctuations of the snowshoe hare in Canada. The results of their investigation to date show a well marked cycle of about ten years in the rabbit population, shared also by those of the red fox and lynx.

The following quotation from Chas. O. Handley bears interestingly upon a burning question: "The expenditure in Virginia of \$348,325 for the taking of 695,653 hawks, owls and crows, over the six year period, 1924-29, may have saved some quail, but I am of the opinion that had the same amount of money been spent on lespedeza seed for distribution more would have been accomplished. Furthermore, since the paying of bounties has been stopped quail have continued to increase and are now more abundant than at any time when bounties were paid."

The Legislature of Mississippi recently adopted a conservation measure limiting the loading capacity of shotguns to three shots. It applies only to quail and officials claim that the regulation will save the lives of many thousands of these birds this season.

## HUMANE TRAP CONTEST

World-wide search for devices that minimize the cruelty of trapping is being rewarded. In the last ten years more than \$50,000 has been spent in this pursuit and in bettering conditions for wild life in this country.

The ninth annual contest of the American Humane Association, with \$500 awarded for the most humane traps, has just been concluded. Hundreds of new devices were submitted by trappers and inventors for adjudication by three of the nation's foremost experts, emphasis being placed on traps that would take the animal alive and uninjured.

The most important change was in traps designed to supersede the common steel trap with jaws operated by a powerful spring. Sixteen contestants submitted traps in which pliable chain grip was substituted for the cruel steel jaws. The judges found that they could place a finger in these traps and that the chain grip would hold without pain. With this method it would be possible to take an animal alive and to release it unharmed if it happened to be a bird, a domestic animal or one that was not wanted.

Highest award, \$100, in this group went to D. Ralph Knapp, Plattsburgh, N. Y., and awards of \$50 each to D. A. Epp, Henderson, Nebraska, Vernon Bailey, Washington, D. C., and Jess M. Hassinger, Reedsville, Pa.

For improved types of cage traps \$75 was awarded to E. M. Long, Cadiz, Ohio; \$50 to Allen McMullen of Number Four, N. Y., and \$40 to Rupert Merkl, Ossining, N. Y. For a trap designed to kill humanely Richard J. Johnson, Langdon, Minn., won a prize of \$85.

The Association states that this year's contest has brought it much nearer its goal—furs without cruelty and that 13 traps which have won prizes in the contest have reached the stage of commercial production.

The general purposes of the Soil Conservation and Domestic Allotment Act, namely, of keeping vegetative cover on the land and encouraging agricultural practices that will combat erosion, would seem to harmonize well with programs for the benefit of wildlife. It was thought that a general program of food patch planting might be fitted in but the regulations differ so considerably by regions that this has not proved practicable. The results to date are not as extensive as hoped for, but they do constitute a worth while beginning and recognition of the right of wildlife to consideration.

One of the practices for which reimbursement to farmers may be made that has adaptability to the needs of wildlife is the seeding of soy beans, velvet beans, cowpeas, sweet clover, lespedeza, and crotalaria when such crops are not grazed or pastured, or are not harvested for hay or seed, and the entire growth is allowed to remain on the land for cover over the winter. Payment at various rates can be made for this practice.

(Continued on page 34)



## NOTES

(From page 33)

A campaign has been launched in Milwaukee to popularize the shoe-leather route to nature study with the hope that hiking programs will not only be successful in the state's largest city but that the movement will become state-wide.

Milwaukee found that some of the youths born and raised in that city had never seen Lake Michigan and comparable situations are believed to exist in all communities where people are not aware of nearby offerings of nature.

The Wisconsin aim is modelled after the youth movement in Germany that has become world famous. Groups would not be confined to their own localities for study hikes but would be taken to other sections by trained leaders to travel designated foot routes. In Germany special provisions are made for overnight stops on hikes that continue for several days. Similar developments are expected here.

Dr. Paul L. Errington, of Iowa, after a study of the Iowa bobwhite, recommends that a system of small inviolate refuges alternating with tracts of shooting grounds be adopted as an automatic device to prevent over-shooting. Incidentally, this is just the sort of program the Pennsylvania Game Commission is trying to get the farmers interested in at this time.

Frederick N. Hamerstrom, of Iowa, in a recent study of the nesting habits of the ringneck in the northwestern part of that state claims that a preference was shown for nesting in edge zones. A study was conducted during three breeding seasons and covered 503 nests. The average number of eggs in clutches varied from 10.1 to 12.4 in different years; for the three seasons the average was 11.2, the range 4 to 26. A decline in the number of eggs per clutch with the advance of the nesting season was observed. Fertility varied little, averaging 93.1%; viability showed greater variability. On the basis of 445 nests under regular observation, 76.9% were unsuccessful. Causes of failure: Man 52.3%; predators 19.3%; abandonment 3.5%; flooding 5.8%; total lack of cover 0.9%; and unexplained 18.1%. Again it is proved that it will pay man more to regulate his own actions than to concentrate only on "vermin control."

A report by C. M. Aldous, of the University of Michigan, on the examination of 54 stomachs of the snowshoe hare indicates that the food of the whole number was practically 100% vegetable. One contained traces of insects. Stomachs collected in winter and spring contained chiefly woody plants such as aspen, willow, and birch; those taken in summer were mostly strawberry, and those in Fall largely grasses.

Dr. Paul D. Dalke, formerly of Michigan, in a report on the economic status of pheasants and the relation of farming practices in the southern part of that state claims that grain, the chief reliance of the bird, is mostly waste; that grain stubble fields are the most important source of winter food; and that a total proportion of insect food is not great, but the pheasant's capacity for destroying insects is great.

New York State game officials have fed deer by using a mixture of soy beans and molasses which is packed and allowed to solidify like candy, in a wire container and later hung six or eight feet from the branch of a tree where deer can readily reach it during heavy snows.

Records show that 170,000,000 gun shot shells are manufactured in this country annually, and if placed end to end they would reach around the world and 4000 miles over. It requires 5,000,000 tons of cotton to produce the powder, which is estimated at 8,500,000 pounds; 58,000,000 pounds of shot is used. The sportsmen of the United States use most of the ammunition in hunting activities, the records show.

## DOGS, CAMERAS, BEARS

(From page 26)

normally encouraged by the large party of men and boys. Even the Airedale had come back during the close of the chase without loss of courage and much informed about bears. As soon as the dogs were tied several adults and the boys ran toward the tree. One enthusiast, a teacher in the

Williamsport, Pa. schools, started to climb the same tree in order to bring the bear down. The bear had proven to be the most considerate bruin, but would he stand this humiliation? "There is only one way traffic on that tree" rang out as the climber was pulled down ahead of the bear.

The bear came down again when disturbed, and leisurely went down the mountain side accompanied by an escorting party of real admirers. When the bear chose, he stopped and the party backed up, giving him more room and awaited his leave taking again. They followed him all the way to the valley and across the same corn field in which he had added to his winter commissary night after night. The owner of the corn field was collecting for the corn, with enthusiastic interest, as they escorted the embarrassed, lumbering bruin to the bank of the bordering stream. The bear paused, looked back at his following, and then waded in and swam the wide, swift stream. He came out on the opposite bank a hundred yards downstream, stood momentarily looking back, shook his beautiful black coat free of the cold water, and, to the cheers from friends, shuffled off for a winter's rest.

The men of the party, who had killed an aggregate of more than fifty bears, agreed with the boys that this was their most thrilling bear chase. And best of all, Mr. Bruin was still in the woods and unharmed. "What shall it be gang, RIFLES?" — "NO — DOGS — and CAMERAS" and PLENTY OF BEARS" rang out their pledge to the wild.

Whatever may be the future Conservation Policy for bears in Penn's Woods, may it safeguard the Birthright of our Youth to find clean, wholesome adventure in Nature's Call of the Wild. Share your sport today, men, with the Conservationists of Tomorrow.

This hunter went  
afield in true  
sportsman style. A  
fine buck!





# Planting Food For Wildlife

By William C. Grimm

EDITOR'S NOTE: This is the fifth of a series of articles by Mr. Grimm on what, how, when and where to plant food bearing trees and shrubs for game.

## Red Cedar

Description: Evergreen tree, usually attaining a height of 25-40 ft. Foliage scale-like or awl-like. Fruit dark blue, often with whitish bloom; about  $\frac{1}{4}$  inch in diameter.

Propagation: Seeds do not germinate for two or more seasons. The fruit should be gathered in late fall and the seed extracted and planted in a cool, moist soil. If desired the seeds may be planted in boxes and buried for two years, then be planted about  $\frac{1}{8}$  inch deep.

Desirable qualities: Furnishes good cover and food for birds. Fruits persist into winter. Desirable for its ornamental qualities.

## Common Green Briar

Description: Stems green armed with scattered, straight prickles. Leaves roundish. Berry rather dry, nearly black when ripe.

## Staghorn Sumach

Description: Small tree usually 10-20 ft. in height. Twigs stout and densely velvety. Leaves alternate, compound, with from 11 to 31 pointed, toothed leaflets which are whitened on the lower surface. Fruit red, in erect, velvety, cone-shaped clusters.

## Smooth Sumach

Description: Like Stag-horn sumach but much smaller and entirely smooth, the twigs covered by a whitish bloom.

'your dog must be fastidious. My dog Roy will eat them.'

"Shortly thereafter he made up another crow pie and invited the warden and his dog. The warden thought the eating was quite good, but on trying the dog out, found that his dog also would not touch the thing. After that, the warden concluded that perhaps crow was not such good eating after all."—F. W. Preston, Butler, Pa.



William C. Grimm - 1936.

## DOG SAYS THUMBS DOWN ON CROWS

"In England it is the custom to shoot the young crows after they leave the nest and before they are very strong on the wing, a regular slaughter being organized at the rookeries where the gregarious crows, of the kind known as rooks, congregate to nest. The young crows are said not to be bad eating.

"I have never tried eating crows, but I was talking to one of my assistants, an elderly Scotchman, who said that he ate them in Scotland as a boy, until one day presenting a piece of the meat to his dog, he found that the dog would not touch it.

"He reported this circumstance to the game warden through whose permission he had been invited to shoot crows on a neighboring estate, and the warden said,



## Some Little Known Pennsylvania Mammals



Fig. 1. Common Mole. Photo courtesy of Prof. H. S. Williams. Fig. 2. Star-nosed Mole. Courtesy of Prof. H. S. Williams. Fig. 3. Woodland Jumping Mouse. Photo by Prof. H. S. Williams. Fig. 4. Short-tailed Shrew. Photo by H. S. Williams. Fig. 5. Silver-haired Bat. Photo courtesy of U. S. Biological Survey.

## HOW TO PLANT MORE GAME FOOD

If every Scout and school boy planted a fruit or nutbearing tree or shrub; if every farmer planted a food patch near game cover; or permitted a few rows of grain near cover to remain uncut; if CCC camps sowed cleared areas to suitable grain; and if sportsmen and others interested sponsored such programs the game food problem in Pennsylvania would soon be solved.

Some sportsmens associations are offering prizes to the individual or group in their county which plants the most game food during a given period. All other clubs should follow suit.

Game Protector Clarence F. Walker of Beavertown who is working on an experimental food planting project for the Game Commission recently suggested a planting program for the Affiliated Sportsmen's Clubs of Snyder County:

The plan calls for the appointment by club presidents of a Committee on Food and Cover. Chairmen of these committees are chosen by the ranking officer and they in turn select from the several townships any number of sportsmen they may need as members of these committees. Their choice is determined somewhat by districts from which these members come. The several members are most likely to be much better acquainted with the problems in his immediate vicinity.

These township Committees on Food and Cover are to make a general survey of their idle acres and at the same time learn how many of these acres may be secured for food planting purposes and which are really desirable for this purpose. Arrangements are then to be made for ploughing and planting the cost to be borne by sportsmen in the several townships. The county wide organization is to pay for the seed.

It is suggested that these plots are to be widely separated so that each township will be covered thoroughly. Not only are we planning to plant in our ringneck territories along streams and lowlands but in upland sections especially where any turkeys are found. Our aim is at least 150 acres and I have hopes of exceeding this amount. Much depends upon the energy and enthusiasm of these committee members.

The Palmerton Rod and Gun Club, Carbon County, spends seventy-five per cent of its receipts for the purchase of game and fish for restocking. The members recently appropriated \$200.00 for W. P. A. improvements. This is one of the clubs that carries on a good will campaign among the farmers and as a result very little land is posted against hunting

## Forest Fires Costly

A review of the data about forest fires in Pennsylvania shows that for the last ten years there has been an average of a few more than three hundred forest fires annually, caused by brush burners. This is not many compared to the several hundred thousand farmers and others who have brush to burn, but that number is about nine per cent of the total number of forest fires in the State. These fires burn an aver-

age of 12,000 acres of woodland and cost the Commonwealth about \$11,000.00 each year to extinguish.

Brush fires have been responsible for as many as five hundred fires in a year, for 25,000 acres burned over and an unnecessary outlay on the part of the State of \$25,000.00. Damage suffered by the land owners has amounted to as much as \$75,000.00.

All of this unnecessary waste and can be

prevented by a little careful planning on the part of those who have brush to burn.

The Department of Forest and Waters at Harrisburg has a very interesting bulletin on Brush Bunting in Pennsylvania, which may be had by dropping a postal card to the Department. Anyone who has brush to burn will do well to write for a copy.

—Penna. Grange News.







The Hawks and Owls are the Farmers and Sportsmens best Friends-Three Hawks and Two Owls are said to be destroyers of wild life -Fact is they actually balance the surplus -and are beneficial.



When you go vermin hunting, leave the hawks alone. Where you find hawks you do not find an abundance of rats, mice and gophers. Few Shooters know a good or bad hawk and shoot everything that flies, killing the Marsh hawk, the sportsmens most dependable friend.



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# PENNSYLVANIA GAME NEWS



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# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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# EDITORIAL

VOLUME VII

SEPTEMBER, 1936

NUMBER 6

## CONSERVE THE EAGLE



THE American or Bald Eagle is making its last stand in Pennsylvania. It is fighting an almost hopeless battle to perpetuate its race, and unless we, as citizens, intervene it will soon join the ranks of the valuable species which have become extinct in the Keystone State.

As American citizens, it should be our earnest desire to reestablish this magnificent bird by safeguarding its nesting sites and seeing to it that every protection is given

the young which are raised. At present there are only about three or four nesting pairs of these birds in the Commonwealth, and the last known nesting site in eastern Pennsylvania commands a wonderful view of the Susquehanna River from Jackson Island, Lancaster County. Through the foresight of the National Association of Audubon Societies an indefinite lease of this island has been granted by the Philadelphia Electric Company to assure safety for the birds, and the Game Commission, through its field personnel, will make every effort to further protect them.

That Bald Eagles have failed to increase in Pennsylvania is probably due to the fact that young birds do not survive, and it can be logically assumed that most of them are killed because they are not recognized as eagles.

The adult Bald Eagle acquires a white head and tail in about three and a half to four years, and when once this distinguishing mark is assumed, there is no danger of anyone mistaking the birds. The young eaglets, on the other hand, are dark in appearance for a long time, and presumably are shot in mistake for "large hawks."

While it must be admitted that upon occasion the Bald Eagle is guilty of taking a chicken, its chief food consists of fish and carrion. It may succumb to temptation occasionally and raid a barnyard, especially when hard pressed in the winter months. However, if this occasional depredation is considered excuse enough to slaughter one of these magnificent birds we might just as well abandon right now our attempts to preserve for posterity any living examples of the majestic creature that was so universally admired as to have it chosen for our National Emblem. Eagles are protected by state law.

## CONSERVE THE WOODCHUCK

THE advent of the high velocity small calibre rifle is gradually spelling disaster for the lowly groundhog or woodchuck in many sections of the State. This is a deplorable situation and something ought to be done about it.

The problem can be attacked locally by sportsmen's clubs who can appeal to the finer instincts of those who are ignorantly waging warfare against these harmless creatures. Woodchucks are not hunted by sportsmen generally. They are hunted assiduously by a few individuals who probably account for more of the animals in a year than all the rest of the hunting public combined.

No one denies that woodchucks should be thinned out where they are too numerous, but the practical minded conservationist realizes, or should, that it borders on asininity to clean them out altogether.

Some farmers do not want them around because there is danger of their horses stepping in their burrows, but these cases are not very numerous. Where such situations do occur the farmer boys are able to cope with them.

Groundhogs make homes and hiding places for rabbits and other small game, and for this reason should be permitted to live in reasonable numbers about the farm lands. It might even be a good thing to protect them during their breeding season.

The individual with the high powered telescope-equipped rifle should be made to realize that by consistently shooting the animals merely to satisfy his personal pleasure he will soon have ruined the sport altogether.

Woodchucks have been practically exterminated in some sections of the State today by a few of these misguided individuals, and one hunter was heard to remark at a sportsmen's meeting recently that he accounted for over 600 in one year. Ten chances to one this man never realized that he was deliberately robbing himself of future days afield. Such hunters should be singled out and asked to go a little easy.







Photo Courtesy Ensminger Studio, Harrisburg, Pa.

**A PROBLEM IN CAPACITY SLOWLY BEING SOLVED**

A Blacksnake Swallowing A Young Cottontail.





#### TALKING IT OVER WITH THE LANDOWNER

It is a Wise Policy to Discuss Your Hunting Plans with the Owner of the Land on Which You Desire to Hunt.



# FIRE PREVENTION AND ITS RELATION TO WILDLIFE

*Photos courtesy American Forests, and U. S. Forest Service*



**Game Protector and Burned Deer.**

Nature has freely, lavishly furnished Pennsylvania with diversified forest conditions. From the earliest days, when the forest furnished the settlers with logs to build their homes and food in the form of game birds and animals, down through the years this gift has been of untold benefit to our people and has played an important part in the development of the country.

Unfortunately, in the early lumbering days, by reason of a limited market, much valuable timber was destroyed. Only the choicest material was utilized and the remainder left to rot or to be consumed by forest fires. There seemed to be no end of the timber at that time; consequently, no thought was given to the future. The result was vast areas of denuded lands where once magnificent trees stood.

We have passed that age of destruction and are now in the age of protection and restoration. Due to lack of vision and restraint by past generations, we of today are confronted with the responsibilities of trying to make amends for the crimes, if they may be so called, committed against nature. The task is becoming easier because most people have come to realize the value of the forests. The blessings emanating from them are manifold. They are essential for the production of useful raw materials for a thousand necessities, from toothpicks to steamship piers, and many products ranging from paper pulp to maple syrup; in the protection of the soil; the prevention of floods, and in providing locations of naturally beautiful playgrounds where people may forget the noise and bustle of cities.

We probably all realize the necessity of forests to the happiness, comfort and welfare of man, but we may not give much thought to the fact that other forms of life depend upon forest areas for their very existence. Practically all of Pennsylvania's wild animals and birds, as well as many song and insectivorous birds, depend in part or entirely upon the forest for food, shelter,

concealment and breeding places.

The greatest enemy of the forest, and of the living things within it, is forest fire. As in years past, it continues to be the lurking and devouring enemy. Every year people continue thoughtlessly to drop lighted matches or burning tobacco in dry leaves, or calmly walk away without extinguishing camp fires. These fires fanned to a blaze by the wind ignite the forest. Hundreds burn brush near woods and quite often permit the fire to escape to the forest. These are not accidents but just plain carelessness.

Everyone loses in the destruction which results. We help to pay for extinguishing the fires; we suffer the inconvenience and cost of floods or low water; we must drink impure water; and we feel the effects in connection with our hunting and fishing. Until each one realizes that the problem is his, fires will continue to take their toll.

The effects of forest fires on Pennsylvania's game program was brought most forcibly to my attention a few months ago while visiting one of our game refuge keepers. A severe fire had only a few days before burned over several hundred acres

By **ROSS L. LEFFLER**

**From a Radio Talk over KDKA, Pittsburgh, August 27, 1936**

on his State Game Lands and on my inspection trip through his section we decided to look over this devastated area. We followed one of his fire lanes for some time and finally reached the top of Chestnut Ridge where just ahead of us we could see the outlines of the burned territory. In a short time we reached the area and as we walked into it almost at once the voice of the forest was hushed. No longer were we hearing the chirruping of squirrels and chipmunks, no cheerful bird notes. Deathly silence reigned supreme. Large trees and small ones alike, black, bare and gaunt, stood shivering as the breezes souged a mournful dirge through their ranks. They were ghastly skeletons of nature's once beautiful handiwork. Some lay prostrate on the ground, charred, burnt, and shrivelled, attesting to the severity of the red demon that had so recently passed along. All life was gone and it seemed almost as if the silence of the grave had surrounded us.

The silence had its effect on us and we walked along without a word. I was almost startled when the refuge keeper suddenly said "Forest fires are one of the worst enemies of game and nearly all of them are caused by someone's carelessness. I wish that those who are responsible for fires could see the things which I see at nearly every fire I help to extinguish. Some of those things are heartrending. While we were fighting this fire any number of deer ran out ahead of the smoke and flames. Some of them would become so terribly excited and bewildered that they would turn

## **A Tragic End**





around and dash right back in. We saw several grouse fly up and circle back into the smoke and fire where, no doubt, they were burned. Five young raccoons came out from the fire with their feet badly burned. They were so thirsty for water that they came up to the fire fighters and drank water from cups which some of the men had."

"This particular area was a good rabbit section. I believe everyone of the fire fighters saw rabbits running. Some would come out of our backfire with hair burning. You could hear them squealing in the fire. I went through the backfire to some squealing that did not stop and found a nest in it. The little rabbits on top were scorched and I killed four to stop their suffering. One small one had burrowed into leaves and was all right. I took the cover off my canteen and wet it good. I threw the canteen away, as precious as water was. I put the little rabbit in the canteen cover. It did not cover the bottom. I carried it all that night and the next day. When I got home I fed it. I am raising this little fellow and when it is big enough to care for itself I will release it."

As the refuge keeper who has had a wide experience in the woods and with wildlife, talked of the fire I could almost hear the crackling of the flames and feel the gusts of hot wind that beat against the faces of the fire fighters like blasts from a furnace. The stories of the fleeing animals were indeed as he had pictured them—heartrending.

As we walked on the refuge keeper said, "This is only one of hundreds of fires that occur each year. You can therefore get some idea of the tremendous losses to wildlife and to their cover and food. Even if a bird or animal does come back here what chance have they to escape a hawk or owl, with no protective covering, or what will they find to eat?"

"One time last spring a fire about five miles down here burned over nearly three hundred acres of fine game territory. A few days after the fire I covered most of the area looking for game which might have been destroyed. I found one grouse still sitting on a nest of eight eggs. The feathers had all been burned off this bird and of course the eggs were all baked and turned brown. Apparently this grouse had not made an effort to leave her nest. Grouse quite often will burn rather than leave their nests or little ones. I have actually seen them sit on their nests and fight at the flames with their wings. I remember one time while fighting fire I saw a grouse sitting on her nest. The flames had reached the nest and she had apparently no intention of leaving. One of the fire fighters quickly pulled her off the nest and beat the fire out with his hands, slightly burning them. We saved both the grouse and her nest of twelve eggs. I have often seen grouse on a burned area a few days after a fire, standing around as though they had lost every friend in the world. It has always been my opinion that these birds had been nesting in the vicinity and returned only to find the nests gone. After one big fire on Broad Mountain a patrol crew and I actually found 28 grouse nests with eggs in them. Of course the eggs were cooked, and worthless."

Pausing a moment to examine the burnt carcass of some animals, my companion

continued, "About five years ago we had a big fire on Round Knob. I had split the fire crew up. One bunch was with me on one side of the fire and the other crew was on the opposite side. The second crew saw a good sized bear poke something into the rocks and hurry around and do the same thing several times. She then galloped away up the hill ahead of the fire. This fire was burning fiercely on the steep side of the hill and it was only a short time until it crossed the point where the bear had been poking something in the rocks. The fire fighters went over to this place and discovered a small bear on the burned ground. They picked it up and found that it had its nose burned and feet blistered. When the little cub squealed two more poked their heads out from under the rocks and they were rescued unharmed. Three of the fire fighters who found them decided that each should have a bear and each took one home, separating the bears by 20 miles. That night all three had all the bear they wanted as they were kept up all the night feeding the

some distance from his dam procuring food and was burned so badly that when it got in the water at its dam it died. The porcupine looks like a torch when it is afire. The quills burn like oil."

These tales of the suffering which forest fires inflict upon our wildlife as told by one of Pennsylvania's game refuge keepers, who are in intimate contact with it, should move all of us deeply. These feelings should then be translated into action.

That fire is the great enemy of the wild creatures is no new discovery. Thousands of years ago Joel said, "Yea, the beasts of the field pant unto thee for a fire devoureth before them and behind them a flame burneth; the land is as a garden of Eden before them and behind them a desolate wilderness." That is just as true today as it was in the day of Joel.

Pennsylvania is now recognized as the greatest game state in America. If it is to remain so, and if the forest which provides the shelter and food for so many kinds of wildlife is to stand, it behooves each one of



Hot and poisoned water kills thousands of fish. All species suffer.

little cubs from bottles with nipples in a vain effort to keep them from crying. One man put his cub in bed with him to keep it quiet for half the night. The next morning these men sent me word about the bear and I gathered up all three of them and took them home in a pasteboard box. They weighed about three or four pounds each. The ears, nose and feet on the one bear which was burned healed nicely with the aid of a little vaseline and good care by my wife and me."

Continuing the refuge keeper said, "I could go on and tell you stories like that for hours and they are all absolutely true. Of course in addition to the game birds and animals, song birds and other birds and animals also suffer. We always find any number of song bird nests on the ground and on the low brush at spring and summer fires. Fur bearers also suffer heavy losses. To me the strangest case of a fur-bearer burning happened last fall at the head of Fishing Creek where a beaver was caught

us to do everything within his power to stop fires.

It will be only a few short weeks until the danger of fires will again be present. I appeal to you when you go into the woods this fall, or at any time when it is dry, to be careful with your fires and with your smoking materials. Tell others who are out, or who may be going out, to be careful. If each of us does his part this tremendous destruction to wildlife and to its home, the forest, will be lessened.

The importance of both can well be summed up in the words of that great writer of outdoor stories, James Oliver Curwood, when he said, "Human life is absolutely dependent upon wildlife and forests. Without these things we would become extinct as a race."

I therefore ask you for the sake of the wild creatures of the forest; for the sake of a pure and well regulated water supply; for the preservation of timber; in fact, for the sake of humanity. **Prevent Forest Fires.**



Type of safety zone poster which will be used under the new Farm Game Refuge Program.

This is the kind of protection all landowners want.

See page 27 for outline map of area mentioned.



# COOPERATIVE FARM GAME REFUGE

By W. GARD. CONKLIN

THE recently inaugurated Farm Game Refuge Program has gotten off to a good start. The first project—it is hoped there will be many more—is in Chester County, where ten wildlife conservation-minded farm owners and one tenant signed the required agreement with the Game Commission. The eleven agreements cover the hunting rights on ten connecting farms comprising a total of 1,507 acres. Within this area twelve refuge subdivisions totaling 200 acres have been provided for.

The various provisions contained in the agreements are here quoted:

**1. Right of Entry.** The Lessee shall have the right of ingress, egress and regress upon the said private lands of the Lessor, at any and all times, for the purposes of protection and propagation of game, the placing or transfer of game birds and game animals of various kinds thereon, and for further purposes connected therewith.

**2. Refuge Area.** ..... acres, more or less, of said land as mutually determined upon, may be declared and used by the said Lessee as part or all of an Auxiliary State Game Refuge for the protection and propagation of game and other valuable wildlife, and wherein no hunting will be permitted.

**3. Fencing.** Said refuge areas may be fenced by the Lessee to prevent grazing in order that the cover and food thereon may be increased for wildlife, or to prevent entry by dogs, etc., when agreeable to both parties, such fencing to remain the property of the Lessee.

**4. Hunting Grounds.** Any part or parts

of the land herein leased unto said Lessee, which land is not within or part of said Auxiliary State Game Refuge area or areas, shall remain open to the hunting of game by the public in accordance with the laws of the Commonwealth of Pennsylvania.

**5. Predator Control.** The Lessee shall have the right to hunt and trap predators, or may grant permits for such purpose to responsible persons acceptable to the Lessor, as prescribed by the said Act of Assembly.

IT IS FURTHER MUTUALLY AGREED THAT:

**1. Removal of Surplus Game.** Whenever the Lessee deems it desirable to remove surplus birds or animals from said property, the Lessor or some member of his or her family may be appointed an agent of the Lessee to trap said surplus game birds or game animals therefrom, in such number as determined upon by the Lessee, at a minimum price of 50¢ per head for stocking elsewhere.

**2. Raising Game.** Or, to raise game to maturity, from eggs or stock supplied by the Lessee, at a minimum price of 50¢ per head for such game raised.

**3. Removal of Surplus Game by Others than Lessor.** Or, in case the Lessor or members of his family do not desire appointment as agent to trap any surplus game birds or animals for the Lessee, the Lessee shall have the right to make such other arrangements as deemed necessary for said trapping.

**4. Strips of Grain.** If the Lessor is willing to leave a strip or strips of grain or hay stand in fields within or near the refuge area, the Lessee may purchase any part or all of it at a price mutually agreed upon.

**5. Safety Zone.** And, the Lessee shall, if desired by the Lessor, cause a Safety

Zone to be created by posting notices 150 yards away from all occupied dwellings and outbuildings used in connection therewith, warning hunters not to shoot within said Safety Zone, but such posting shall not prevent the owner or occupant from using firearms or hunting within said Safety Zone. The Lessee also shall furnish reasonable protection to the lands, fences, livestock, and other property of the Lessor during the hunting season to prevent undue damage thereto; and shall cooperate in the enforcement of the Safety Zone restrictions, in accordance with the provisions of law.

**6. Cancellation.** It is further understood, and of necessity agreed to since it is a provision of law, that in case the Lessor desires to sell the property herein leased and such sale cannot be consummated subject to the within lease, the Lessee, acting through its Executive Secretary, may cancel this lease at any time within sixty days after request for such cancellation is filed with the Executive Secretary of the Lessee. If so cancelled the Lessee shall have an additional sixty days in which to remove wire, fence, signs, etc.

It is the firm belief of all who are interested in the Cooperative Farm Game Refuge idea that projects such as this one will result in a much closer bond of friendship and a better understanding between the farm owners concerned and the sportsmen of the State. The several farm owners in Chester County have demonstrated their sympathetic attitude toward the plan, their willingness to cooperate, and also certain confidence in sportsmen and the Game Commission by executing the agreements. The fact





# PROJECT No. 1

that none of the farm owners will be paid a rental for the use of their land is conclusive evidence of this. It now remains for the Game Commission and sportsmen to prove their confidence was justified. Hunters must carefully observe the gentlemen's agreement to respect the farmer's rights and wishes.

There is every reason to believe that farm game will be materially benefited through the protection afforded by the sanctuary areas and which in turn will result in providing better hunting conditions.

No hunting whatsoever will be permitted within the twelve refuge subdivisions, the boundary lines of which will be marked and posted in the near future. In all probability, this work will be completed before this article is in print. A single strand of No. 9 galvanized wire customarily used for game refuges will be stretched around certain of the subdivisions. Woven wire fencing may be stretched around certain of the others

**This Cooperative Poster appeals to all hunters to respect the rights of the landowner.**

depending on whether a satisfactory type to keep out dogs, but which will admit ring-neck pheasants can be found. The well known red and white metal auxiliary refuge signs will be posted around the twelve subdivisions warning hunters that they are approaching an area within which hunting is unlawful.

Two other types of posters, for use only on cooperative farm game refuge projects, have been printed. Both are expected to provide greater security for the farmers and their property. One type, with large red printing will be used in the vicinity of buildings to mark the safety zone; the other, an educational poster may be used anywhere else on the farm. Their use is optional with the respective farmers. Reproductions of these two posters will be observed on Pages 6 and 7.

Although the farm game refuge program was explained in some detail in the May 1936 issue of the Game News, its principal objectives will bear repetition. The plan is applicable only in the counties of Bucks, Montgomery, Chester and Delaware in the southeast portion of the State and Allegheny, Beaver, Butler and Washington in the southwest. Small acreage is not desirable. If the plan is to be productive of

worthwhile results each project should comprise a thousand acres or more, the larger the better. The farms comprising each project must connect, forming as solid and compact a block of lands as possible. A sizable block will permit creating a dozen or more sanctuary areas within each project. The sanctuary areas, of course, must be good game breeding or retreat areas. Hunting will be permissible on most of the land within each project.

Each cooperating farm owner will be compensated by the extra protection placed around his buildings, livestock, fences, newly seeded fields, etc. No sportsman will violate the trust placed in him, and the unscrupulous hunter can expect to find himself in the clutches of the law.

A cooperating farm owner or some member of his family may also earn a little extra money by trapping surplus game, or by raising game from eggs or chicks supplied by the Game Commission.

Another form of compensation is provided for in that the Game Commission will gladly pay the farmer a reasonable price if he is willing to leave a designated strip or strips of grain uncut adjacent to the refuges to furnish food for game.





By GEORGE E. KRAMER

**Fleshing beaver hides. Extreme care must be used to keep from tearing the pelts.**



underfur which means that the manufacturer will have to cut out and patch the spot. The Fox also begins to rub and shed, especially on the sides. The Opossum and Raccoon lose their creamy white pelt and take on a glassy appearance, and with the absence of fat the pelt becomes thin. By shaking opossum pelts or passing the hand over them, many will show loose hair just ready to fall out at the least disturbance. The rich dark color of the raccoon fur fades out sometimes to a tawny yellow, and the beautiful tail assumes a sickly blend of color instead of the well marked rings of a winter skin.

The rich beautiful color of the Mink begins to fade and a reddish cast takes its place, unnoticeable to the untrained eye possibly, but easily recognized if the pelt is folded over the hand and held at the level of the eye. The reddish cast is easily seen and very probably short kinks at the ends of the guard hairs give more indication of deterioration. The pelt often assumes a stiff boardy condition.

These conditions all arise quite some time before actual shedding begins and therein lies the main reason why NO FUR DEALER, WHETHER HE BE HONEST OR DISHONEST can buy your late caught furs on the same assortment as he would your winter skins.

Therefore, if you are really interested in realizing the fullest value of your fur catch, it is evident that you must first restrict your trapping and hunting to those few months when the fur is at its best. For Pennsylvania this is from November 15 or possibly some years December 1 to February 1 or February 10, except for beaver, muskrat and otter. December 1 to March 1 embraces the best time for Muskrats, and the last two weeks of February will net the best skins of the Beaver obtainable in this state without en-

## MAKING THE MOST OUT OF RAW FURS

**I**MPROPER handling of the skins of fur-bearing animals costs the hunters, trappers and dealers thousands of dollars each year.

There are many ways in which the average person can improve the looks and quality of the skins he prepares for market.

Of first importance is the condition of the animal when it is pelted. It must be healthy, well fed, and properly developed.

Development in an animal can well be described as one would with an apple. The green, undeveloped or even almost fully developed apple does not make a good marketable article nor does it give satisfactory results to the consumer; neither does the undeveloped, unprime, or blue pelted skin.

The blue or black pelt is caused by the undeveloped roots of the hairs which have had their growth in the flesh and fat just underneath the skin. When the skin is properly primed these roots have receded into the skin and are no longer visible.

Hence the remedy for the unprime pelt is to refrain from killing any animal before it has had ample time to prime up.

Slightly blue skins will bring from half to two thirds the price of a prime skin of the same size and apparent quality, while black pelts bring almost nothing.

Prime skins are pelted either a clear white or, in case of the Muskrat and Beaver, a nice clear red color, and if properly skinned, stretched, cleaned and dried should command top market price.

Details on skinning, stretching and drying will follow later in this article.

Then compared with the over-ripe and partly spoiled apple we have the rubbed, shabby, springy and over-prime skins obtained during the late winter and early spring.

Towards the end of January we begin to find occasional skunks which have spots on the center of the back, or rump that have the guard or top hair rubbed down to the

croaching on the breeding and illegal season for trapping them.

**THE OTTER SEASON IN PENNSYLVANIA SHOULD BE CLOSED ABSOLUTELY AS IT IS NOW ALMOST EXTINCT IN THIS STATE.** You cannot make money killing an otter no matter how well you care for his pelt. He will be worth much more to you and every one else if he is left to reproduce himself to the point where he will again travel at least our major streams.

Now that we have decided to start with the animal in proper condition to produce a No. 1 pelt, I will leave you do the trapping. Having succeeded in obtaining a fur-bearing animal either by trapping, hunting or by raising it, it should be killed as soon and as humanely as possible. A quick rap on the head with a stout club will usually do the job. Don't try to crush the skull as it is not necessary, and does not make skinning any easier. To kill a skunk it is much better to



strike or shoot it with a rifle in the back of the neck or back so as to break the spinal cord. Properly done it will deprive him of control of his body and power to throw his scent. Or, if your trap is attached to a pole you can lift the skunk, trap and all off the ground quickly and it can easily be drowned in a nearby stream. Remember, get his feet off the ground in a hurry.

If you have a muskrat, mink or any other animal that is wet, grasp the head in one hand and snap it like a whip, then reverse the action by grasping the hind feet and root of the tail and snap. Right here let me remind you not to make the mistake of snapping that nice mink by the tail without having a good hold on the feet also. Reverse this snapping until the water is all out of the fur and hang the unskinned animal up for a time to dry out fully. You can hang the pelt up to dry if the fur side is out.

**SKINNING:** Now lay your animal on its back, head away from you and pointing either to your right or left as is most convenient. You can skin on a bench over a log, or kneel on the ground. Grasp the hind foot and insert the knife in the heel, making one cut across the lower abdomen to the other foot. The cut should be along the line where the short belly fur joins the longer back fur, just a little forward from the vent. From the center of this incision cut directly past the vent down the tail about half or a third of the way. Now carefully skin by starting at the intersection of the two cuts, being careful when skinning around the vent so as to not leave any fur on the carcass, and in the case of the skunk, be very careful of the fleshy covered glands on either side of the vent and close to the skin, very noticeably red in contrast to the white fat. If you don't know it yet these are the scent glands that provide the skunk with his only means of defense against his enemies. If you cut these glands you may go out of the fur business right there, and you surely will need to change your clothes in the wood shed.

Always keep the skin stretched well when skinning over the scent glands, and you should have no trouble by cutting either the glands or the skin. Wrinkles mean cuts and slow down your work. In removing the glands from the carcass take plenty of additional fat and flesh and if possible dispose of them immediately in a manner that will not permit them to be of any inconvenience to others. I find burning them quick and effective.

Now thrust your thumb between the skin and the body at the tail and pull both ways. The skin will pull right away with a part of the tail skinned. Slide a clothes pin, forked stick or even the points of the fingers over the tail bone, being careful to make close contact with the fleshy part of the tail, and with your other hand grasp the rump of the animal and pull steadily. If your hold on the tail is tight against the flesh instead

of the skin, it will strip the skin from the bone. Here is one place where it is a decided advantage to have the scent glands removed.

Having removed the tail bone from the skin, grasp the hind legs in one hand and the loose skin in the other and pull the skin towards the head until you have exposed the entire hips. Drop the carcass on the floor and step on it with one foot just in front of the hips and pull the skin over the head until you come to the shoulders when you may have to cut the muscles before you can pull the front feet out. Another pull will bring you to the head when you will have to cut off the ears close to the head. Still another pull will bring you to the eyes where you will again have to use your knife care-



Skinning Beaver

fully and close to the orbits so as not to cut the skin unnecessarily. You can now pull the skin to the nose and possibly over it or you may have to cut the cartilage which joins the skin to the nose.

In the case of the fox and mink the front legs should be opened on the inside from the paw to just above the knee joint, and the paws carefully skinned out to the last joint, leaving the toe nails on the skin. The upper leg is pulled through as the skin is being stripped over the shoulders.

At this point I wish to call attention to a very common practice of opening the skin from the heel directly to the vent or to the base of the tail. This gives a triangular shaped skin at the tail and belly side.

Possibly you will prefer to hang your animal up on a gambrel when stripping the skin from it instead of working on the ground. Suit yourself, but if the carcass is to be used for food it must be suspended as a matter of cleanliness.

However, remember to use your knife sparingly. It is only needed in spots mentioned and its continued use will just mean that many more holes in your pelts.

The above method of skinning will care for all fur bearing animals native to Pennsylvania except the Beaver and this is done entirely different from any other animal, wild or domesticated.

The Beaver is skinned by first cutting around all four feet, or cutting them off at the edge of the fur and then making one incision from the chin to the root of the tail. Do not cut skin out to the feet. Peel and skin the pelt back from the one center, cut



until you come to a leg, and then pull leg in through the skin, leaving only the small hole where the foot was cut off. Continue this way until you have the skin off, being careful at all times to remove as little flesh as possible. Much easier said than done.

We will go back to the commoner fur bearer's pelt and proceed to care for it.

**CARE OF STRETCHING:** You will first need a suitable board, preferably white pine or poplar, some 3-penny or lath nails.

These boards should range in thickness from 1/4 inch for weasels to 5/8 inch for foxes, with intermediate skins using 1/2 inch material. In this illustration the fox board shows about 45 inches long. However, now that Silver Foxes have become such a staple article, the boards should be 58 to 60 inches so that the tail may be nailed out flat.

We will take up the care of a muskrat or mink pelt first, by placing the clean, dry pelt on a board of suitable size. If it is not clean and dry, make it so by beating out any dry dirt with a switch or washing out any wet dirt and then drying the skin, flesh side out, hair side to the board, with the edge of the board down the center of the back. Take a dull corn knife, flat file or even a flat hard wood stick about a foot long with an end in each hand and with the boarded pelt pointed towards your stomach and the base of the board against something solid. Push all loose fat and flesh from the skin, fleshing only that part near the center of the board. If you get working along the edges, you will likely cut through the skin.

When you have both sides cleaned off, remove pelt from the board and replace again with the entire back on one side of the board and the belly on the other side, and finish your job of scraping or fleshing. Your pelt will then have all the stretch it needs and will be ready for nailing which should be done immediately by using nails about an inch apart and always endeavoring to keep straight, uniform lines along all edges. Nail the mink tail out flat. It is not necessary or even advisable to remove the thin layer of flesh that adheres close to the skin on the back. This fleshy layer really adds color to your muskrat and mink and can better be removed in dressing the fur.

*See illustrations on page 28 of properly and improperly stretched pelts of the muskrat and opossum.*

Skunk, Raccoon and Opossum, which hibernate to a certain extent, carry a layer of fat on their backs varying in thickness from a sheet of paper on sick or undernourished animals to as much as an inch thick on healthy animals in midwinter.

This fat can be removed in much the same way as that on a Muskrat. Skunk and Raccoon tails should be nailed out flat just the same as those of the Mink.

In nailing out a Fox pelt the same procedure should be followed, and in addition the

(Continued on page 17)







Wood ducks reared at  
State Game Farms.

## PERMITS FOR ROADSIDE MENAGERIES REQUIRED

August 15 marked the last day upon which roadside menagerie owners could legally exhibit wild birds and animals.

This humane law sponsored and pushed to a climax by Governor Earle provides that all wild creatures be kept in enclosures of adequate size, that they are well protected from the elements, that they are fed and watered regularly, and that the public be protected by the erection of substantial guard rails around all cages. Applications for permits can be secured from either the Game Commission at Harrisburg or the local Game Protector.

## 9:00 O'CLOCK HUNTING FIRST DAY ONLY

Many hunters are of the erroneous impression that they cannot hunt small game until nine o'clock in the morning every day during the season. This is not the case. The nine o'clock regulation applies only to the opening day of the small game and furbearing animal season, namely November 6.

## WHAT OUR READERS THINK

"I think the management of the Farm Refuge Program which you outlined in the May issue of the 'Pennsylvania Game News' will meet with general approval.

"I have read it over and it impresses me as having been given intelligent, systematic and constructive thought. It is my belief that you have timed well your action to assist in the propagation and conservation of small game.

"Plenty of time, work, and money has been spent on big game in Pennsylvania and the theory has proven a great success and has been copied by many other states. It is a pleasure to see you put machinery into operation now that will please the small game hunter.

"Personally I shall be glad to assist or contribute in any way that I can to assist the Game Commission, many of whom I know and highly regard."—W. W. Wasson, Pittsburgh, Pa.

The Academy of Sciences will officially celebrate its opening day by a joint gathering of its own staff, officials of the Game Commission and prominent local sportsmen. The Carnegie Museum has not yet announced its final plans.

Sportsmen everywhere should welcome the splendid gestures of these allied institutions and should contribute, by their presence, to the success of them.

# CURRENT TOPICS

## BIDDLE TO COLLECT GRIZZLIES

Nicholas Biddle, President of the Game Commission, recently left for Pitchfork, Wyoming, where he will photograph antelope and collect grizzly bears for the Philadelphia Academy of Sciences.

He will be the guest of Charles J. Belden, owner of the Pitchfork Ranch, who recently transported seventeen antelopes successfully by airplane to Philadelphia. Fifteen of the animals were consigned to the Philadelphia Zoo and two were placed aboard the Hindenberg enroute to the Berlin Zoo. This is a striking example of what can be done in modern air transportation.

Bill Mundy, famous pilot of Cody, will fly Major Biddle from Billings, Montana to the Pitchfork Ranch.

## GORDON AT WESTERN CONFERENCE

Seth Gordon officially represented the Game Commission at the 30th convention of the International Association of Game, Fish and Conservation Commissioners, held at Grand Rapids, Michigan, September 2, 3 and 4.

Events of interest to all sportsmen transpired at this great conclave of United States and Canadian conservation officials, a report of which will appear in a future issue of the Game News.

## HOLD WILDLIFE EXHIBITS

For the first time in the history of Pennsylvania two of the Commonwealth's leading scientific and educational institutions will sponsor, with the assistance of the Board of Game Commissioners, large environmental exhibits of game birds and animals, fur

## IMPORTANT NOTICE

Attention is hereby called to that section of the Lacey Act, regulating interstate commerce in wild animals. This provision requires that all packages containing wild animals or birds, or the dead bodies or parts thereof, or the eggs of any such birds, when shipped from one state to another, shall be plainly and clearly marked or labelled on the outside thereof with the names and addresses of the shipper and consignee, and with an accurate statement showing the number and kind of the contents.

In Pennsylvania this applies particularly to trappers who ship furs out of the State.

bearers, and protected birds native to the Keystone state.

The institutions which have so enthusiastically manifested their desire to promote the interest of wildlife conservation are the Philadelphia Academy of Natural Sciences, headed by Charles M. B. Cadwalader, and the Carnegie Museum, Pittsburgh, directed by Audrey Avinoff.

Both institution leaders are well known for the interest they have always taken in the preservation of wildlife.

The Academy of Sciences will begin its exhibit on September 15 and close November 15, whereas the Carnegie Museum will start October 1 and close December 1.

During these periods everyone is invited to visit the exhibits, which may be seen at any time during the regular visiting hours of both museums.

Game officials, sportsmen's associations, Boy Scouts, and others will assist officials of both institutions in every way possible.



## FINANCIAL STATEMENT OF BOARD OF GAME COMMISSIONERS—JUNE 1, 1935 TO MAY 31, 1936

STATEMENT OF REVENUE AND DISBURSEMENTS - BOARD OF GAME COMMISSIONERS  
FISCAL YEAR JUNE 1, 1935 to May 31, 1936

## REVENUE

Balance in State Treasury to credit of "Game Fund" June 1, 1935.....	\$ 967,407.35
Less: Unwarranted requisitions chargeable to year ending May 31, 1935.....	46,855.14
Balance in Treasury Department to credit of "Game Fund" at close of business May 31, 1936.....	\$ 920,572.21
Net revenue from Hunters' Licenses.....	1,276,576.95
Penalties.....	63,209.11
Special Licenses.....	11,101.00
Interest on Deposits.....	8,787.92
Miscellaneous Revenue.....	8,700.97
Amount credited to Game Fund during year.....	1,365,575.95
Total available.....	\$ 2,286,148.16

## DISBURSEMENTS

	Executive Office and Division of Accounting and Budget General	Predatory	Propagation and Game Farms	Game Research and Distribution	Protection	Refuges and Lands	Education	Total
Salaries.....	\$ 29,116.50	\$ 4,595.05	\$ 15,990.51	\$ 3,304.67	\$ 153,816.09	\$ 64,981.21	\$ 11,208.95	\$ 283,012.98
Traveling Expenses of Salaried Employees.....	3,578.82	541.20	2,131.68	1,941.28	83,218.00	17,929.08	2,283.69	111,623.75
Deputy Game Protectors:								
Wages.....	375,800.64							
Expenses.....	26,014.86				61,815.50			61,815.50
Wages:								
Labor Cutting Fire, Refuge and Boundary Lines, Road Repairs, etc.....						18,706.37		18,706.37
Labor on Game Farms, etc.....	2,665.75	2,042.12	40,684.79	1,922.86	2,878.91		2,064.28	52,258.71
Purchase of Game.....			2.00	34,337.00				34,339.00
Feed for Game.....			18,632.88	693.70	26,842.09	228.97	20.82	47,018.46
Express on Game.....				12,296.48				12,296.48
Express and Cartage.....	38.95	4.84	113.37	1,689.06	1,360.95	351.65	287.03	3,845.85
Purchase of State Game Lands (title & survey included)						175,910.18		175,910.18
Fixed Charges in Lieu of Taxes.....			106.69			23,104.66		23,211.35
Buildings and Construction by Contract.....			425.00			1,261.00		1,686.00
Buildings and Construction other than by Contract.....			8,733.20			4,713.88		13,447.08
Establishing new Refuges.....						3,173.20		3,173.20
Repairs to Buildings, Grounds & Equipment by Contract.....	144.91		141.10	62.00	148.74	2,763.39	31.05	3,291.69
Repairs to Buildings, Grounds & Equipment.....	873.31	150.54	2,272.70	6.12	1,058.24	1,470.49	1,344.92	2,176.34
Miscellaneous Supplies.....	839.16	577.93	8,546.34	730.97	4,805.07	5,760.05	1,194.67	22,554.19
Motor Equipment and Accessories:								
Passenger Cars.....					3,446.07	565.00	624.34	4,635.41
Trucks and Tractors.....			730.95					730.95
Motor Supplies, including Gas, Oil and Repairs.....	528.57	24.16	1,736.57	68.18	3,617.38	1,347.31	786.72	8,103.89
Light, Power and Fuel.....			2,466.56		83.91	176.17		2,726.64
Insurance.....	388.58	37.97	503.05	26.98	1,822.52	850.82	152.92	3,782.90
Postage.....	5,163.39	2,700.00	66.21		1,443.25	160.95	720.58	10,255.39
Telephone and Telegraph.....	83.82	1.90	721.78	84.55	7,921.07	1,763.22	142.33	11,468.71
Rentals - Real Estate and Equipment.....			8.00		779.65	2,478.00	784.50	4,338.95
Bounty Claims (\$116,289.00 less checks issued but not cleared through banks \$581.00 and refunds \$1.00 plus checks issued prior to 6/1/35 and accounted for this year \$94.00).....		115,801.00						115,801.00
Advancement Account (\$40,000.00 less refunds \$126).....		39,874.00						39,874.00
Return of Fines Collected.....					4,320.00			4,320.00
Fees:								
Attorneys.....					831.25			831.25
Medical, Taxidermy, etc.....			48.00		231.67	84.58	77.50	441.75
Deer Proof Fence.....	9,885.52							9,885.52
Damages by Bears.....	1,627.12							1,627.12
Live Stock.....			75.00					75.00
Horse Feed at Refuges.....						228.80		228.80
Other Maintenance Services and Expenses.....	104.50		304.20	602.50	209.42	601.28	2.50	1,824.40
Newspaper Advertising.....	7,986.06		6.00		351.35	252.87		8,596.28
Printing, Binding and Paper.....	2,497.96		61.97	24.87	3,579.93	987.55	6,694.67	13,846.95
Printing Hunters' License Tags and Misc. Forms (through Department of Revenue).....	6,530.28							6,530.28
Administering State Employees' Retirement System (through Department of State).....	972.50	160.00	520.00	115.00	5,175.00	2,740.00	470.00	10,152.50
Totals.....	\$ 73,861.54	\$ 166,510.71	\$ 105,054.55	\$ 57,906.22	\$ 369,761.07	\$ 335,191.24	\$ 28,891.47	\$ 1,135,156.80
Balance in "Game Fund" at close of business, May 31, 1936.....								\$ 1,150,991.36

## THE BALANCE TO THE CREDIT OF THE "GAME FUND" ON JUNE 1, 1936, IS SUBDIVIDED AS FOLLOWS:

Balance in Treasury Department to credit of "Game Fund" at close of business May 31, 1936.....	\$ 1,176,001.32
Less: Vouchers included in above statement, in course of payment May 31, 1936 and subsequently paid.....	25,009.96
Less: Amount standing to credit of Refuges and Lands May 31, 1936 (major part of which covers land now under contract)	474,953.09
Less: Other commitments incurred and chargeable to year ending May 31, 1936.....	45,298.22
Less: Amount allocated and committed for special budgetary purposes for year beginning June 1, 1936.....	239,128.03
Add: Department Advancement Account on deposit for payment of bounty claims.....	331,314.02
Net Operating balance available at close of business May 31, 1936.....	\$ 371,314.02
*Approximate amount required for operating expenses each year after May 31, until revenue from sale of licenses for the current year is available.	

The item of Printing Hunters' License Tags in the above statement under column headed General does not include cost of the 1936 Hunters' License Tags, which accounts for decrease of approximately \$14,000 compared with preceding year. This item of expense will reflect an increase next fiscal year, as it will include cost of tags for two years.

"On July 16th a fast freight train was going west on the Pennsylvania Railroad, moving at a speed of 40 miles per hour between Lockport and Bolivar, Westmoreland County. Two deer came out of the brush, one made it across the tracks in front of the train, the other one ran along side of the engine cylinder in the loose cinders for about 50 car lengths when it gained enough headway to get across the tracks ahead of the train."—Game Protector C. C. Brennecke, Altoona.

"A weasel climbed the wall of the Gettysburg National Bank, entered the window and proceeded to the bookkeeping department where it was killed."—R. C. Anderson.

WANT FOX SQUIRREL BONES TO  
AID MEDICAL RESEARCH

In order to further the study of an uncommon disease known as Porphyria, Dr. William J. Turner, State Branch, Cresson, Pa., is eager to secure the bones of as many fox squirrels as possible.

All sportsmen are asked to bear this important request in mind and if they kill any fox squirrels during the coming hunting season to send them to Dr. Turner.



"Highland turtles can smell a forest fire quicker than a fire warden. I've seen them come out of the woods with their necks in the air long before anyone else knew of the existence of a fire."—J. Cooper Young, North Carolina Fire Warden.

William F. Henser of Germania reports observing a fox chasing a fawn deer. The fawn was running in circles through a large patch of goldenrod, bleating piteously about every couple of jumps. The fox was about six feet behind, and had not Mr. Henser interfered, it would have no doubt caught and killed the little creature.





## QUESTIONS AND ANSWERS

- Q. When does the season for training dogs open?
- A. The dog training season begins August 20th, and continues until next February 28th.
- \* \* \*
- Q. Is it lawful to train dogs on Sunday?
- A. Yes, after August 20th, providing you first obtain consent of the landowner upon whose land you intend to train.
- \* \* \*
- Q. Is a hunter's license necessary to train dogs in season?
- A. No; but the person handling a dog must not attempt to take any wild birds or wild animals.
- \* \* \*
- Q. Is it legal to use a pump gun for small game hunting in Pennsylvania?
- A. Yes. For hunting native game such as rabbits, quail, pheasants and grouse there is no limit to the capacity of your shotgun, but to hunt migratory game birds such as waterfowl, woodcock and snipe, your pump gun must be limited by some permanent adjustment to a capacity of three shells.
- \* \* \*
- Q. Is it legal to use a telescope sight for deer or other game hunting?
- A. Yes.
- \* \* \*
- Q. Is the small game and fur bearing animal season limited to nine o'clock every morning, or does it apply only to the first day?
- A. It applies only to the first day, the reason being to give farmers and their families a chance to complete their morning chores in time to join in the chase, and to provide additional safety at a time when the concentration of hunters is the greatest.
- \* \* \*
- Q. Are eagles protected in Pennsylvania?
- A. Yes. They are protected both by federal and state laws.
- \* \* \*
- Q. Is a hunting license necessary to shoot unprotected birds and animals?
- A. Yes.
- \* \* \*
- Q. Must a permit be secured in order to have mounted protected birds and animals which are found dead?
- A. Yes. Make application direct to the Game Commission in Harrisburg in such cases whereupon due consideration will be given your request. Taxidermists usually will skin out and hold any specimens pending issuance of the permit, especially during hot weather when the hides are apt to spoil if not removed promptly.
- \* \* \*
- Q. Is it compulsory to return reports of the game killed at the close of the hunting season?

## NEW LITERATURE

**WINGS, FUR AND SHOT**—A splendid guide to American hunting by Robert B. Vale, well known Philadelphia sports writer. Contains splendid pointers on all kinds of hunting, brief histories of all species of game birds and mammals, and what constitutes proper hunting and camping equipment. Splendidly illustrated by Dr. George M. Sutton, nationally known artist and explorer. For further information, write the Telegraph Press, Harrisburg, Pa.

**JUST FISHING TALK**—A delightful assortment of fishing tales by former Governor Gifford Pinchot. From the mountain streams of Pennsylvania to the scented isles of the South Seas the author weaves a magic web of angling enchantment. This splendid book is also published by the Telegraph Press at Harrisburg, Pa.

**THE NORTHERN BOB-WHITE'S WINTER TERRITORY**—by Paul L. Errington of the Iowa State College of Agriculture and Mechanic Arts. This little booklet covers a detailed account of bob-white quail in its wintering territories, and how this splendid little game bird acclimates itself to diversified conditions. It is splendidly gotten up and should be of extreme value to all sportsmen.

## FORESTRY ASSOCIATION WILL HOLD ANNIVERSARY MEETING

The American and Pennsylvania Forestry Associations will hold a Joint Annual Meeting at the Lakeside Hotel, Eagles Mere, Pennsylvania, September 9-11.

This year marks the 50th Anniversary of The Pennsylvania Association, and the national organization is urging a large turn out to discuss federal and state forestry problems.

The meeting will open Wednesday evening, September 9, with addresses by officers of both associations. On Thursday, September 10, busses will take the party to the Lycoming Hotel, Williamsport, to participate in a luncheon and to discuss the subject of flood control. The party will return to Eagles Mere in time for dinner and motion pictures of interest to all conservationists.

On Friday, September 11, a field trip in busses will be taken to Rickett's Glenn, otherwise known as Kitchen's Creek. An opportunity will be given for an unusual hike in a section of Pennsylvania's greatest forested area.

## TRAPPING INSECTS WITH LIGHT

Research carried out by Samuel G. Hibben, Director of Applied Lighting, Westinghouse Lamp Company, discloses the value of light in trapping insects at night. This is especially true of the Public Enemy of Eastern Pennsylvania, the Japanese Beetle.—Science News Letter.

A. Yes; in order that a close check may be kept on the annual kill.

\* \* \*

Q. Is it good practice to set traps in holes?

A. No. Rabbits and other valuable small game are likely to be caught, and for this reason the practice is frowned upon by all conscientious trappers.

## MANY DUCKS PERISH

Wild ducks perished by the hundreds the last few weeks at small-water holes in the drought region of the northern Great Plains, reports to the U. S. Biological Survey indicate. These losses, however, may be offset by the increase in the number of ducks this year in Canada.

Field parties of the Biological Survey in close touch with the waterfowl situation report that large broods have been hatched out in the northern breeding grounds in Canada. Last spring the migrations to Canada were somewhat larger than in 1935—due largely to the severe restrictions on waterfowl hunting in the United States last fall.

Breeding grounds in Canada showing effects of the drought are in southern Alberta and Saskatchewan. This region borders on the United States drought area and losses of young ducks there may run as high as 50 percent, reports indicate. At some of the small-water hole areas in the Dakotas losses as high as 90 percent have been reported. Heavy losses have also occurred in Montana.

Officials of the survey believe, however, that the increase in the number of ducks in the northern part of their breeding range is



Mallard, Male

perhaps large enough to offset the heavy losses in the drought region.

The officials point out that the breeding grounds in the drought area represents about one-sixth of the continental breeding range, and that much of the breeding range in the Dakotas had been seriously affected by droughts in recent years as well as by the present drought. Last spring, however, conditions for waterfowl in these States were much improved. Waterholes had been filled by spring rains and the northern migration of waterfowl along the Mississippi flyway was larger than in 1935. Large broods were hatched out, but many of these have been wiped out by the drought.

Hundreds of young ducks and many adult birds have been rescued the last few weeks from the dry areas in these States and transferred to refuges and large bodies of water by CCC workers, sportsmen, game officials, and local residents. More than 2,000 ducks were recently removed from a region of dry pot-holes southwest of Minot, N. D., by CCC workers from Biological Survey camp. Most of the birds rescued in this region were pintails and shovelers. Other species saved were mallards, bald-pates, redheads, canvas backs, and teals.



## Be Careful with Firearms

Never let a loaded gun stand around the house!

Never point a gun at anyone, loaded or unloaded.

Never pull a gun toward you by the business end.



The only safe gun  
is the gun SAFELY POINTED

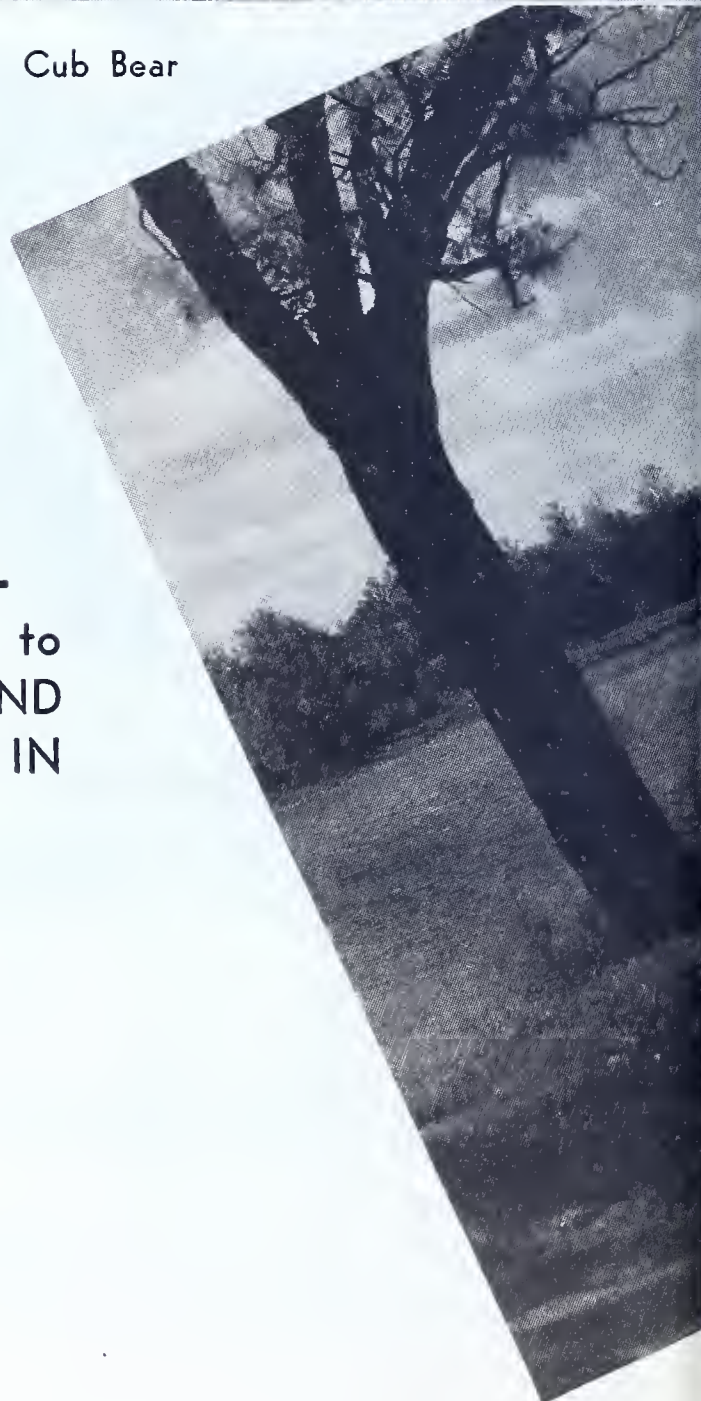




Blacksnake



Cub Bear



Reeves  
Pheasant



## PICTORIAL

A section devoted to  
NATURE STUDY AND  
CONSERVATION IN  
GENERAL.

Fire Tower  
on State  
Forest Lands





Ringneck  
Pheasants  
reared by  
Lehigh County  
Fish and  
Game Ass'n



Chukar  
Partridge



Starting  
young



Buck Deer  
in the  
"velvet"

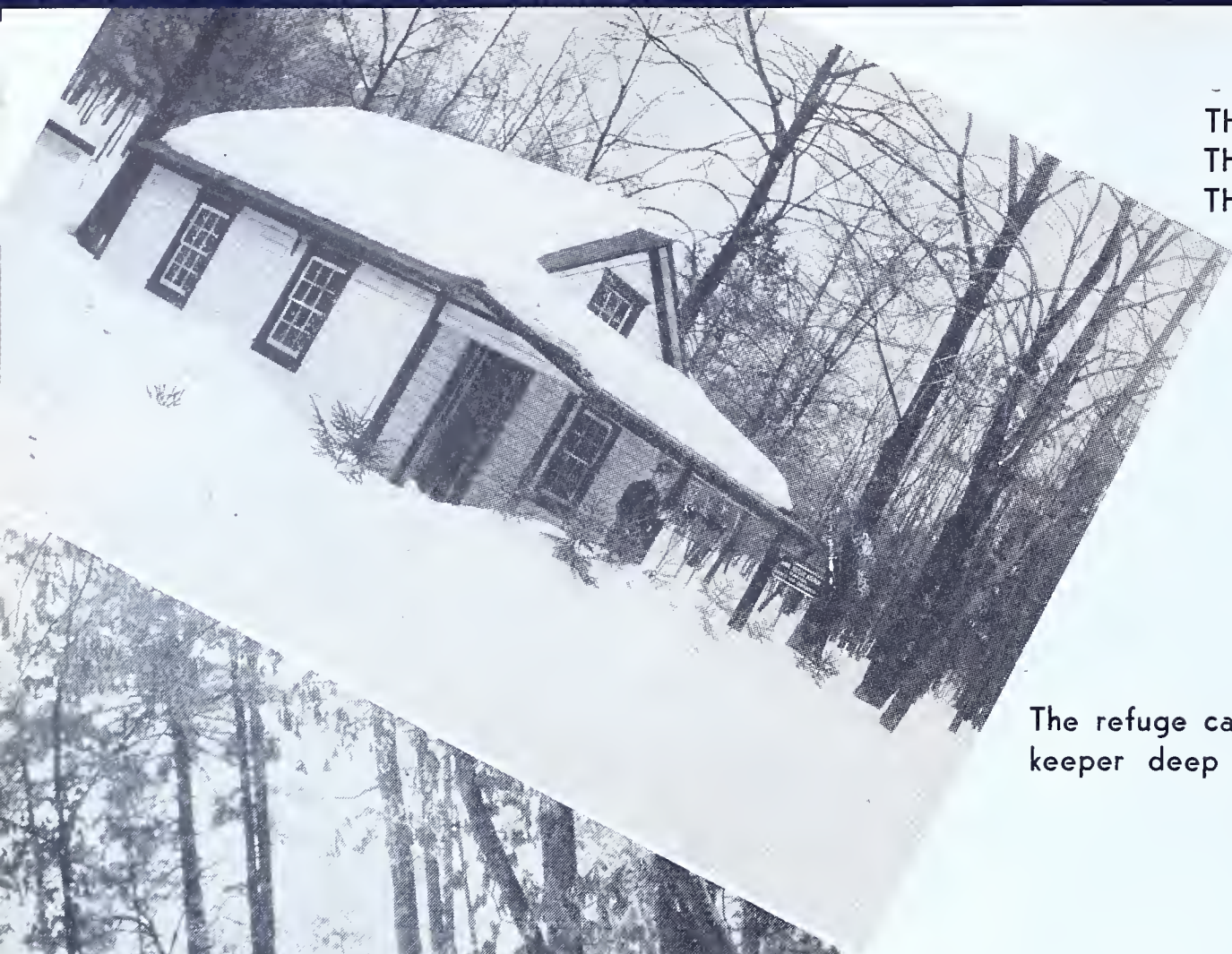


Picturesque scene along  
Loyalsock Creek, Lycom-  
ing County.





THE GAME REFUGE IS  
THE MASTER KEY TO  
THE PERPETUATION OF  
WILDLIFE



The refuge cabin and refuge  
keeper deep in the woods.



The refuge maintains a  
constant supply of game.



Refuges in areas like  
this increase wildlife.



# Planting Food For Wildlife

By WILLIAM C. GRIMM



**BLACK HAW**  
(*Viburnum prunifolium*)

**COMMON ELDER**  
(*Sambucus canadensis*)



**HIGH-BUSH BLACKBERRY**  
(*Rubus allegheniensis*)

**BLACK RASPBERRY**  
(*Rubus occidentalis*)

**SASSAFRAS**  
(*Sassafras variifolium*)

William C. Grimm - 1935.

**Editor's Note:** This is the sixth of a series of articles by Mr. Grimm on what, how, when and where to plant food bearing trees and shrubs for game.

## Black Haw (*Viburnum prunifolium*)

**Description:** Small tree or large shrub with short, often crooked trunk and round-topped crown. Leaves simple, 1-2 inches long, finely toothed on margin. Fruit dark blue with a large seed and sweet pulp, in open clusters.

**Propagation:** See Flowering Dogwood (in previous issue).

**Desirable qualities:** The fruits persist until late in the fall and provide good bird food. Often forms dense thickets and is very attractive as an ornamental.

## Common Elder

**Description:** Tall, straggling shrub. Twigs light brown with large pith. Leaves opposite, compound. Berries black in flat-topped clusters, ripe in summer.

**Desirable qualities:** Provides summer food for birds. Forms dense thickets which afford good nesting sites.

## High-bush Blackberry

**Description:** The erect or arched, angular stems are armed with stout thorns. Quite like the cultivated blackberries but fruit is smaller.

**Propagation:** May be propagated like cultivated blackberries.

**Desirable qualities:** Furnishes excellent food and cover.

## Wild Black Raspberry

**Description:** Canes thorny, covered with a white bloom as are the lower surfaces of the leaflets. Much like cultivated raspberry.

**Propagation:** May be propagated like the cultivated raspberries.

**Desirable qualities:** Furnishes excellent food and cover.

## BIG RANGE FOR BIGHORN SHEEP IS SET UP IN SOUTHERN NEVADA

A million-acre Federal game range for Nelson's mountain sheep, or desert bighorns, and other wildlife, has been established in Southern Nevada by an executive order of President Roosevelt. Before unrestricted hunting reduced the number of bighorns to small scattered bands, these mountain sheep were widely distributed in the rugged arid sections of the Southwest. Since then most Western States have enacted laws protecting bighorns throughout the year.

## MAKING THE MOST OUT OF RAW FURS

(Continued from page 9)

front legs as well as the long hind legs should be nailed out flat. Small mink or weasel boards should be inserted in the front legs to provide something on which to nail the front legs and feet which must be pulled through on the pelt side at this time.

### A FEW DON'TS FOR THE TRAPPER

Don't ignore other peoples' rights and feelings either in regards to trapping on their lands or the disposal of carcasses.

Don't trap before you know that the fur is prime, and don't trap after it begins to

get springy. If you don't know yourself, just ask your fur dealer.

Don't try to skin dirty muddy animals until after you have thoroughly washed and dried them.

Don't attempt to skin frozen animals; bury them in the snow or wrap in a burlap sack and bury them in the manure pile until they are fully thawed.

Don't use your knife any more than necessary when skinning and don't use it at all until you have it sharp.

Don't remove skins from stretching boards

until fully dried, except foxes which can be turned when about  $\frac{1}{2}$  to  $\frac{3}{4}$  dried.

Don't let animals lay around before skinning; cats, dogs and rats may save you the trouble of skinning and selling the pelt.

Don't hang up skins with the flesh side out unless you have them on the board or they are fully dried.

Don't use tacks to nail your skins out unless you have a spite at your fur dealer.

Don't ship your fur to the house that quotes away above the others. Remember furs have a market value just the same as all other articles of merchandise, just about the same to one as to the other.

The highest quoter is usually the lowest payer.



# CAMOUFLAGE IN THE ANIMAL KINGDOM

Herein is outlined a very interesting account of the protective coloration of wild birds and mammals, and insects.

By W. J. MUELLER

The fawn deer and snowshoe rabbit are striking examples of protective coloration.



**T**O the average person, the term "camouflage" and its subsequent meaning is a product of the World War, but to the student of natural history, its application has been known for ages. The word camouflage is, of course, a direct product of the war, but its manifestations have been found in practically every branch of the animal kingdom under the better-known appellation of protective coloration, or mimicry. If all the examples of this type of camouflage encountered on a ramble some summer afternoon, through a forest, or along a creek meandering through a marsh were carefully recorded, the result would come as a great surprise to the average layman.

The best examples of camouflage are found in the class INSECTA. As the majority of these animals are defenseless, their survival depends on the extent to which they can make themselves invisible to their natural enemies, and the measure of their success is truly remarkable. The outstanding, or classic example, is the resemblance of the Dead-leaf butterfly to a withered leaf. The upper sides of the wings of this insect are dark with purple and orange markings, bearing no resemblance to a dead leaf whatever, but when the butterfly is at rest, it holds its wings together over its back, leaving only the lower sides exposed. The under-sides, on the other hand, are the exact color of dead or dried leaves. To carry out the resemblance still further several of the scales on the fore-wing are devoid of pigment so as to look like rot or shothole fungus so often found on leaves. On the hind-wing is a tail-like appendage which looks like a leafstalk, when the insect is at rest. Radiating from this imitation petiole are markings that resemble the mid-rib and veins.

Another well-known example is the resemblance of the Viceroy butterfly to the Monarch. This is not strictly protective resemblance, but a form of it known as mimicry. It is a known fact that for some reason the Monarch is distasteful to birds and is consequently let alone by them. If a young bird catches one of

them by mistake, it soon learns to profit by its error, and leave them alone in the future. Now the Viceroy, on the other hand is possessed with a delicate flavor, but resembles the Monarch so closely that the birds fail to detect it, and so it goes unmolested.

A striking illustration of protective coloration is found in the chrysalids of certain butterflies. Chrysalids of the Milkweed butterfly, which are found on the plants, are naturally green, while those of the swallowtails, which are often found on bark of trees, are brown. Not only do the pupae of different species harmonize with their surroundings, but individuals of the same species may vary from their background. This fact was demonstrated by an eminent English entomologist who placed several individuals of the same species in boxes with different colored linings, and the color of the chrysalid formed harmonized with the color of its respective box.

In many cases not only does the color resemble the background but the form also, as was illustrated by Kallima. Another interesting example is that of the larvae of the geometrid moth. When the tree or shrub on which they are feeding is disturbed, they assume a stiff or rigid position so as to resemble a dead twig. As the body of this caterpillar is covered with small brown spots and humps, resembling the scars left by fallen leaves or buds, the similarity is very striking. The Common Walking-stick is another good example of special protective resemblance; it is indistinguishable when at rest among the leaves and twigs. Practically all the common fall butterflies, such as the question-sign and tortoiseshell are brown and have ragged-edged wings so that they look like dead leaves as they flutter aimlessly around.

A few insects illustrate what is known as alluring coloration; that is, they re-

Monarch (milkweed) Butterfly





semble some brightly-colored flower, and thus entice their prey within easy reach. The best example of this is the Praying Mantis of India. This insect resembles some brightly-colored orchid.

Because the bees and wasps are protected by their stings, many insects gain their immunity by passing for one of them. They are usually large and very conspicuous, being banded with black and yellow. A good example of a group of insects that gains protection by this method is the flower-flies. These insects are members of the true flies and naturally are harmless.

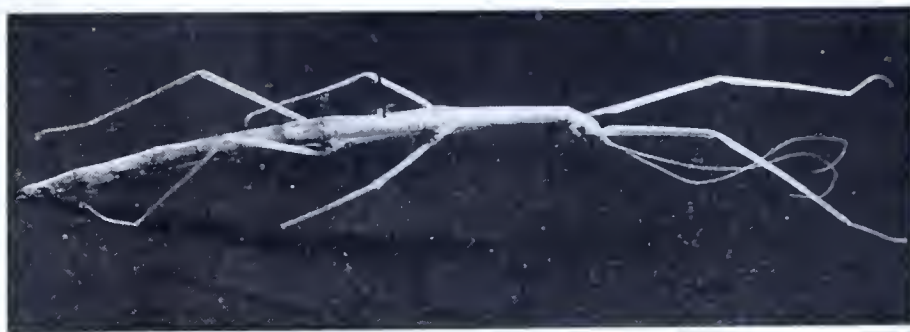
Among the reptiles and amphibians the phenomena of protective coloration may also be noted. Any country urchin who is a disciple of Izaak Walton and is in the habit of using live frogs for bait, can tell you the difficulty of finding them in the green grass or swamp. The Horned Toad, on the other hand, which is an inhabitant of the desert, is a mottled brown. The best known example of a reptile harmonizing with its background is the chameleon of the tropics, which can change almost momentarily from a green to a brown, depending on its present environment.

Camouflage is also found among the fishes. In practically every case, the dorsal side of a fish is darker than the ventral side. This helps to make the fish less conspicuous. Looking down from above, the dark back harmonizes with the dark ground below, while on the other hand, the lighter ventral parts make the fish less noticeable from below, when the body is thrown against the background of the sky. In the southern seas, where brilliantly colored corals and aquatic plants abound, the fishes are naturally brighter in color than in our regions where greens and browns predominate. The fantastically colored Kihikihi of the Hawaiian Islands would be an easy prey if transplanted to one of our native streams. Several fish also possess the chameleon-like trait of being able to change their color to harmonize with the rocks above which they happen to be resting.

Among birds protective coloration is common, though not as vital as with insects. Here again the upper side is darker than the lower, and for the same reason as with fishes. In most of the small perching birds the female is duller, usually an olive or green, to render her inconspicuous while brooding. In the case of the Phalarope, however, where the duties of incubation and the care of the young fall mostly on the male, the reverse is true.

Every nimrod can tell of the difficulty of seeing a squatting woodcock or ruffed grouse. Among the underbrush these two species successfully defy the hunter to find them, unless he should be fortunate enough to possess a good bird dog.

Most birds that remain with us during the winter, the permanent ones or the winter visitants, change their plumage with the seasons. The Snowy Owl is white with black and brown markings in the summer, while in winter it is nearly pure white. The same is true of the Snowflake and many other species. The best example, however, of this seasonal moult is found in the ptarmigans, which are members of the Grouse family. In winter when the ground is covered with snow, this bird is almost a pure white.



The WALKING-STICK, common as it is, is not often observed.

the snow begins to appear, the plumage again becomes mottled as in spring, and when the world is wrapped in its mantle of glistening white, and this would even be too conspicuous, the fourth moult takes place, leaving a pure white bird on a pure white background.

Many birds are rendered inconspicuous by what appears at first glance to make them very noticeable. Take, for instance, the Scarlet Tanager. On first thought this flaming red and black bird would seem to make an ideal target for a small boy with an air rifle or a sling-shot. But watch while the bird is feeding high up in the tree-top. The black wings so succeed in breaking up the outline of the bird, that it is more difficult to see than would be a bird of a solid color.

Every observer of bird life will notice that all birds that feed on the ground have some white in their color scheme. This serves to break up the solid outline, and renders them less visible from the ground when they rise against the sky. Birds that illustrate this phenomenon are the Meadowlark, Slate-colored Junco, Vesper Sparrow, and many others.

Birds that belong to the order of Woodpeckers, and spend most of their time on the trunks of trees, are either a barred black and white, or brown, like the Brown Creeper. Of course, there are exceptions to this, but the object of this paper is to show how the various animals copy their surroundings, and not to pick out the exceptions.

Just as in the case of insects, some members of the same species of birds will vary with their environments. The Song Sparrow is the best example of this. East of the Mississippi River it is comparatively dark, growing paler as one goes farther west, and again dark as one travels into the timbered lands of the northwest. The desert owls and hawks are also lighter than their relatives of the east and far west.

Similarly, as birds change their plumage to meet the corresponding changes in their movements, animals change the color of their fur. Some even go to such an extent that man has given

them one name in winter and another in summer. This is true of the Common Weasel, or Ermine. As the ermine is almost invisible at a distance of a few feet on a snowy background, the chances of capturing its prey are increased manyfold. In order to counterbalance this advantage in favor of the prey, they also must change their color. And this is just what happens. As winter approaches, the Northern Hare, which is one of the animals found on the ermine's menu, sheds its cinnamon-brown hair and has it replaced with white. This same interesting phenomenon is found in practically every polar animal.

Any follower of the  
(Continued on page 27)

The woodcock probably is more protectively colored than any other bird. Note how the above nesting hen blends with her surroundings.





# PROTECTING TREES FROM DEER

By E. M. MILLS

**D**URING the past three seasons the writer has carried on experiments for the purpose of determining the most successful methods of protecting orchard trees from deer. Various ideas were tested out in a number of New England orchards. The following methods have been tried out with variable results. In some cases control was 100 per cent effective, and in others the repellents were of little value. As the cost of treatment is relatively small, and since there is a chance for success, these methods are recommended for further trial by interested orchardists. Further study will be necessary to determine the cause of variable results, such as scarcity of food supplies.

## HABITS OF DEER

Deer feed chiefly at dusk and early dawn, although they may be active during the entire night. The time of year when they damage trees varies from place to place. Ordinarily, when the new growth starts in April and May, deer begin to feed on this tender food and continue to do so through June and July. In some places deer injure trees only during the summer months, while in other orchards the feeding goes on the year round.

Deer show a distinct preference for cultivated plants where these are present. They will turn from laurel, berries, and buds and twigs of the woods to alfalfa, clover, garden crops, and young fruit trees. Among fruit trees, apples are preferred to peaches, and cherries are the least attractive. Even among apple trees, in one orchard the McIntosh was relished more than the Delicious, and in another, the Alexander was apparently liked better than the Northern Spy.

Deer injure fruit trees in three different ways: first, the ends of the lateral branches are eaten, particularly the new growth, from the time of planting until the trees are five or six years of age, or until they attain sufficient size to be beyond the reach of the animals; second, the fruit and leaf spurs are removed from the lower branches of older trees; and third, the trunk and branches of both young and old trees are horned. Horning is the rubbing of the antlers of the deer against the tree.

It does not require many deer to do a considerable amount of damage. One orchardist reported 87 two-year-old trees destroyed in three nights by one deer, as shown by the easily followed tracks. In the same orchard 175 trees were destroyed in one night by six deer. An entire orchard of 1,000 young trees was totally destroyed and abandoned.

## UNSUCCESSFUL METHODS OF CONTROL

Scaring devices, such as white or colored rags hung on each tree, have not proved very satisfactory. In one instance white rags were tied to 300 apple and peach trees, and at the end of three years the trees had been damaged so badly that they were plowed up.

Several kinds of sprays have been used on fruit trees to repel deer. Deer have been



observed to browse on trees almost immediately after an application of lime-sulphur or nicotine dust. Double-strength kerosene emulsion as applied for aphids has been reported to keep deer away from young trees for a week. A combination of Paris green and lime was effective for a short time, according to one orchardist.

Many orchardists have tried to keep deer out of their orchards by fencing. From results of observations on fences of various heights and types, it is recommended that fences should be at least eight feet high and made of strands of wire not more than seven inches apart. Deer when pressed may surmount fences 10 or 11 feet in height. Although it is possible to build a fence that will keep deer from orchards, its cost makes it prohibitive to most farmers.

## ASAFOETIDA

The most successful method of controlling deer is by the use of asafoetida. This material is an imported gum supplied in three forms: gum asafoetida in mass, tears, and in powdered form. The lump or mass form is the proper one for use in deer control. Lumps the size of a golf ball are placed in a cotton sack, similar to a tobacco bag, and hung on each tree three to four feet from the ground. One pound of asafoetida, selling for 35 cents in small quantities, will make about 12 such pieces. The cloth bags cost about one cent each, or may be made by hand from cheesecloth for much less.

The repellent odor given off by the asafoetida will often keep the deer from trees treated in this manner. While the asafoetida remains soft this odor will continue, but on becoming hard, its effectiveness is lost. Therefore, with moist weather conditions one application of the bags may be sufficient for the summer season, but with dry weather the bags of asafoetida may harden in five or six weeks, and will need renewal.

## NAPHTHALENE FLAKES

Another repellent is naphthalene flakes, a chemical composition similar to moth balls. Naphthalene flakes sell for about five cents a pound in barrel lots. About two heaping tablespoons of flakes are used to a bag, one pound making about 10 bags. This material also is affected by weather conditions. In dry weather the bags last about eight weeks, and in wet weather about five weeks. During an average season the bags may need refilling about four times.

## AUTOMATIC FLASH GUN

A scaring device known as the automatic flash gun has also proved to be effective in keeping deer from orchards. The gun gives a loud explosion every few minutes, and in addition the pilot burner throws a beam of light in different directions as the gun swings about in the wind. The gun is hung from a tree or tripod four or five feet from the ground. It operates by water dripping on carbide, thus generating an explosive gas. Daily renewal of carbide and water is necessary. The gun sells for \$35, and carbide for about \$6 per 100 pounds; thus the operating cost is very small. The gun will not effectively protect an area of more than 1,000 trees. It is generally set in operation a little before dusk and allowed to run until after daybreak, or until it can be conveniently turned off. Although deer might pass through the orchard while the gun is going, they usually will not stop to eat.

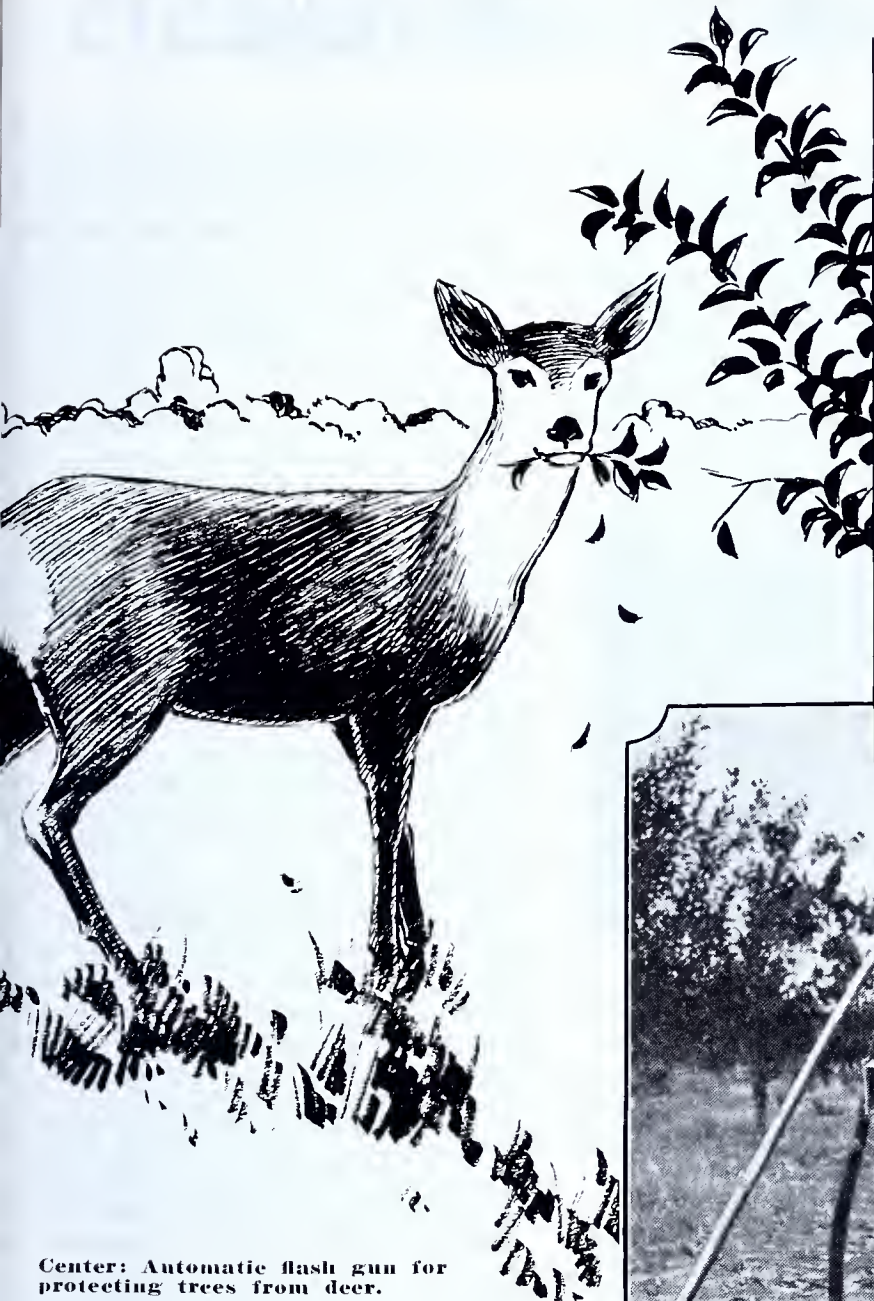
## TAR-PAPER CONES

The latest method for the control of deer is the use of tar paper. This method was tried by County Agent H. H. Lovejoy, of Sanford, Maine. Cut tar paper into pieces of about four by six inches and roll them into cones, fastening them at the smaller end with paper clips, leaving an opening of about one and one-half inches. Slip the cones over the trees and let them rest about three feet from the ground on some of the side branches. For a newly planted tree or a small tree probably one cone is sufficient. It is believed that the scent from the tar paper will last from three to four months. At the end of this time some coal-tar repellent should be painted on the cones, or they should be replaced with new material. According to Mr. Lovejoy, this method gave 100 per cent control, but the deer may walk through the orchard without eating the trees.

## TRAPPING DEER

Trapping, as a method of possible value in controlling deer damage, while practical, is both laborious and expensive. Sometime ago game authorities of Wisconsin employed a new idea in trapping deer in shipping crates designed along lines suggested by the United States Biological Survey. The crates are fitted with a drop door, trigger, and treadle board, as are commonly used in box traps for smaller animals. The crate traps are then transported to the place where deer are known to be feeding extensively, camouflaged with brush, and baited with apples, oats, salt, and twigs. Deer were found to enter the traps freely, and were readily transported for restocking where desired. It is possible that the further development of this plan will provide a means of removing deer from the vicinity of cultivated areas to sections where they can do no harm. However, where the animals are as numerous as they are in Pennsylvania a general reduction of the herd is usually the only logical solution to the problem.





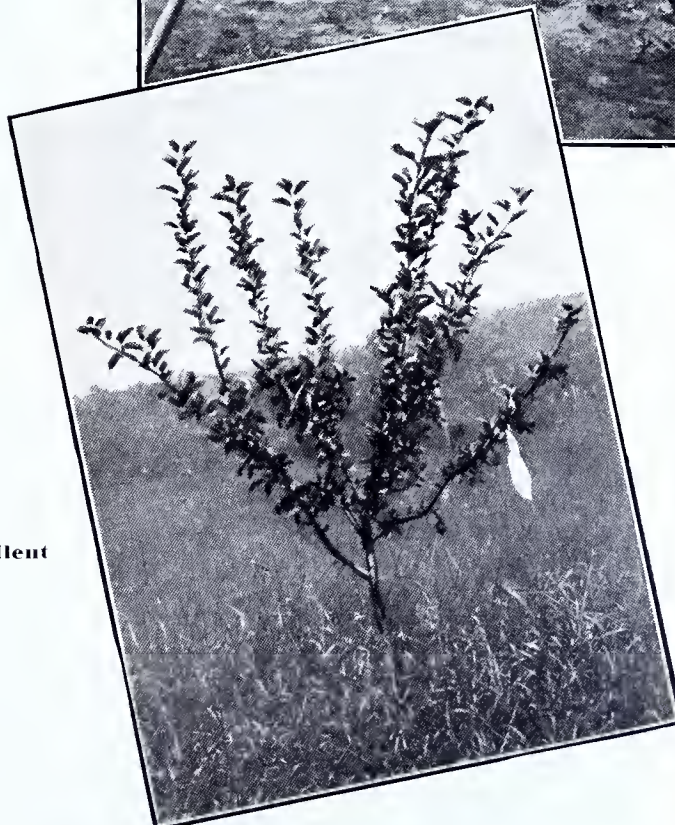
Center: Automatic flash gun for protecting trees from deer.



Left:  
Sample of  
deer damage.



Below:  
Tar paper cones  
protect trees from  
deer damage.



Tree protected by repellent  
hung in bag.

Article and photos  
reprinted through courtesy  
American Fruit  
Growers Association.



# GAME REFUGES AND STATE FORESTS

By JAMES F. BOGARDUS

Secretary of Forests and Waters



Such roads will be closed except for administrative purposes.

**T**HE Department of Forests and Waters is considering plans to set aside certain wilderness areas in Pennsylvania within state-owned forests as additional refuges for game and other wildlife within the near future.

The areas may be of only a temporary nature in some cases, but where the wildlife is abundant, and the remoteness of the area will not permit recreational or scenic development, these particular locations might very readily become permanent refuges.

The future of the program depends entirely on a survey being conducted at the present time, and the number, location, and permanency of the sites located will be determined after state foresters complete their studies.

We are also considering the proposal of closing certain newly constructed roads except for administrative purposes in state forests under our jurisdiction. And, except where this is prohibitive due to fire hazard, I can see no objection to closing these roads during certain times of the year. It would unquestionably be of vital importance in the conservation and propagation of the Commonwealth's wildlife.

Both matters are under consideration at the present moment, and we will be prepared to proceed with our program in cooperation with the Board of Game Commissioners and the Board of Fish Commissioners just as quickly as the surveys can be made.

Conservation of game and wildlife is of great importance to the Department of Forests and Waters, and in attempting to formulate a definite conservation policy in the Department, fish and game have always received as much consideration as our other important problems, such as the protection of timber, the conservation of water, and

the development of forest recreation. In my opinion these subjects are so closely related, one is so dependent upon the other, that no conservation program can be successfully established unless the functions of each are closely coordinated.

The Department of Forests and Waters recently established model forest and game study plots at Mont Alto to determine the amount and kinds of forest cover eaten by deer.

The experiments to be conducted, in cooperation with the Game Commission, will determine to a great extent the future forest management policy of our Department as it relates to game cover and tree production.

The areas set aside will be surrounded by high wire fences and a certain number of deer will be placed inside of each "temporary preserve." The deer will be weighed periodically to determine whether sufficient food

is available. At stated intervals individual deer will be segregated on stated areas and their weight recorded. A study will be made of the plants they are feeding upon, and the relation of this game cover to tree production.

From these observations, it is believed, a policy in forest management can be determined, which will produce the highest yield of food and cover for game, as well as high grade timber in the respective sections of the state on State Forests.

One of the chief forms of recreation in the State Forests today is hunting, and I am deeply concerned over the outcome of the Mont Alto experiments so that a definite policy in forest management can be set up wherein forestry and game can be more closely correlated. By the same token, I am very anxious to experiment with the plan of setting aside certain wilderness areas, and closing certain newly constructed roads during periods of the year for the conservation and propagation of game and other wildlife.

Forestry and game are dependent, one upon the other just as all conservation problems are, and it will be the policy of the Department of Forests and Waters to treat one problem with as much consideration as the other.

That the State Forests, administered by the Department of Forests and Waters, represent the biggest conservation problem in the State as it relates to the sportsmen using these areas for recreation, can be seen by the fact that more than 500,000 hunters used the State Forests during the past season, and approximately one-half the deer shot by hunters were killed on State Forests.

Sinnemahoning Ridge Road, Clinton and Cameron Counties.





# THE RIFLE AND THE SHOTGUN

A CAREFUL investigation of the relative merits of the high and low powered rifle, or shotgun using pumpkin ball, revealed the following facts:

Information was gathered from various manufacturers of rifles, shotguns and ammunition, as well as representatives of the National Rifle Association.

The lowest powered rifle that could be recommended for large game is an old 38-40 or 44-40 Winchester, and even this has a killing range of over a mile, while the accurate range is under 200 yards. Also, it is nearly as humane a killer as a modern high powered rifle.

## THE RIFLE AND THE SHOTGUN

The bullet of a high powered rifle travels a very much shorter distance after it has hit trees or brush than any low powered bullet or pumpkin ball. Also, it seldom glances. Less than one percent will ever leave the spot they hit. This is not true of low powered bullets. At least one out of every three will glance and continue for as much as a mile with killing energy.

The maximum range, or anywhere near it, of a high powered rifle is never reached while hunting because even in open territory it is necessary to hold it at a high angle. In hunting deer such a rifle, therefore, would have a very limited range because the elevation at which it is usually raised is seldom above horizontal, and a bullet ejected from a rifle held in this position, will, according to tests, fall very rapidly and strike the ground in from 300 to 400 yards.

A test made by officials of the Game Commission also proved this point. A high powered 250-3000 Savage, and a low powered 32-40 Winchester were both shot through a field of standing wheat. The low powered bullet carried all the way through the field but the high powered bullet was broken up before it had gone but 100 yards or so.

A sporting high powered rifle bullet with a velocity of 2,500 feet per second cannot withstand the force of contact with any solid or semi-solid substance and will break up upon contact. A low powered bullet with velocities under 1,500 feet per second can withstand the shock of impact without breaking up. They will leave the object struck at about the same angle they hit, and continue in the opposite direction with practically the same velocity at which they struck.

A 12 gauge shotgun will throw a pumpkin ball nearly a mile—possibly more, as its muzzle velocity is more than 1,300 feet per second.

Information recently gathered from every large game state in the Union shows that with one or two exceptions all favor the use of the high-powered rifles in hunting large game.

Only in one or two cases did states report accidents ever occurring from stray bullets, and these were comparatively few.

In every state the greater percentage of accidents were self-inflicted.

Our experiences here in Pennsylvania show that:

1. Any rifle, whether high or low powered, is dangerous if carelessly handled.
2. Records over a period of years show

that more accidents occur through the use of shotguns than rifles.

3. Practically all accidents occur within a comparatively short range. According to records in the offices of the Game Commission very few instances of accidents occurring outside the range of 100 yards have ever been known.

4. A check of accidents occurring during the past ten years shows that only very few hunters were hit by stray bullets.

5. While searching cars, officers of the Game Commission checked, on numerous occasions, the condition of firearms, and were amazed to find over 80% of them loaded and lying in all sorts of positions in the cars.

6. Many hunters going from camp to hunting grounds and returning, carry their rifles with the safety off.

7. Men have been killed unloading their firearms in camps; taking them out of automobiles; pulling them over fences; pulling them up into trees; shooting promiscuously at unprotected targets, such as throwing of hats, tin cans, etc.

8. In conclusion:

- a. A bullet or pumpkin ball can only be considered dangerous if it happens not to have hit the animal shot at, and in this event the pumpkin ball is most dangerous because it will not readily be broken up by intervening brush and twigs.
- b. If the bullet or ball hits a man between the shooter and the animal shot at, the shooter is responsible, not the type weapon.
- c. Also, if a man is shot in mistake for game, the fault is the shooter's.

# CATCH THEM YOUNG

By SCOTT DEAROLF

THE huntsman of tomorrow should be in the woods today. Graduation from the high school of woodcraft should be prerequisite to any course of the sportsman's action. Long before the freshman gunner casts his excited eye on a fluff of warm game and swings his shiny cannon into line, he should know something about his target. If he is going to blast away at the wildlife of our forests just because he heard that any motion was game, he might as well stay at home behind the garage and place his shot in the neighbors' dogs as they jump over the barberry. Rather, he should be schooled by pleasant hours of his youth spent in the woods without a gun. He should develop a wildcraft instinct that observes and understands the actions of the creatures he meets. It would not be asking too much that he knows most everything there is to know about what he sees of wildlife, for such an education would make his future hunting days exceedingly worthwhile and would tend to impart to his fellow hunters the same thrilling experience. Here's how:

Among other things about the precise meaning of the word "hunting," Webster says that searching for, and following game precedes the capturing or killing. How is our tenderfoot going to search successfully if he doesn't know where the game is to be found? How is he going to follow intelligently if he knows no mark or sign or track? How is he to search or follow at all? He'll never know buck fever.

Instead, if he knows the habits of the animal he desires to hunt he will at once recognize that he uses his wits more than his trigger finger. Matching one's wildcraft with the "animals" cunning, is hunting. Thus the actual fun our young hunter receives is directly dependent upon his wildcraft background. Tried sportsmen know this; it is imperative for worthwhile hunting that the untried learn.

The schooling is every bit as interesting as the actual hunting. Take those teen-age, eager-eyed youngsters of yours to the woods and you'll be surprised at what the eager eyes will see. Education begins immediately. Questions will dart like so many swallows and you must be ready. If you're not, a little effort beforehand will equip you. Public libraries can tell you all about mammals, birds, reptiles, salamanders, frogs, fish, insects, crayfish, spiders, worms, lichens, moss, ferns, flowers, trees. There need be no excuse. Of course you do not need to be a naturalist—the books are for individual investigation. You merely guide the ball once it has started pell-melling. As interest grows the services of your public museum and State might be tapped for additional information. And you, yourself, sir, are brimming over with wildcraft knowledge that can't be found in books, museums, and government bureaus.

As the knowledge piles up in those eager heads, that spirit of conservation, which we recognize as the second benefit of this wildcraft education, will bud. Here is where our freshman hunter secures for his fellows the same good hunting he is to enjoy, for from his time spent in nature's own laboratory there develops that keen sense of respect for his relationship with living things. Here lies the foundation of conservation. I don't mean the embryo hunter will rack his gun for a camera and not care a tinker's dam to keep the family name among the great in the bear-hunting counties, but that he will understand better the why of the game regulations, appreciate the need for conservation and consequently abide, wholeheartedly, to the letter of the law.

These two benefits will be realized only when today's sportsmen realize that they are responsible for tomorrow's. Let the next generation of hunters first take to the woods without guns or first be schooled in the proper handling thereof.



# HERE ANI

## 4,000 RELIEF WORKERS TO AID WATER FOWL

Approximately 4,000 persons on relief, most of them farmers in the drought area, will begin work shortly on projects planned by the U. S. Bureau of Biological Survey for the restoration and improvement of 51 refuges for water fowl and other wildlife on land either owned by the Federal Government or dedicated by farmers to the conservation of water.

An allotment of \$600,000 from Federal Emergency Relief funds to the Biological Survey for these projects planned in nine states was recently approved by the president. States in which the work will be undertaken and funds allotted for labor and other expenses are: North Dakota, \$353,548; South Dakota, \$74,934; Montana, \$44,830; Nebraska, \$42,830; Louisiana, \$37,476; Wisconsin, \$10,709; Michigan, \$10,709; Oklahoma, \$7,500; and Wyoming, \$7,500.



**STOLEN:** English Setter. Has black circle on back over hip. License No. 3296, Montgomery County. If found notify William C. Diesinger, 314 W. 11th Ave., Conshohocken, Pa.



"Steve" Crothers of Philadelphia, and Mrs. Fred Hess, Boyertown, winners of singles trap competition at recent state shoot, Bradford, Pa.

## WITH THE CLUBS

All the out-door recreation clubs in Chester County will combine and stage a rousing two day sportsmen's rally at the Philadelphia Young Men's Christian Association Play Grounds, a mile south of Downingtown, this Fall. The proceeds of the meet will be used to purchase game and fish, and grain for winter feeding in Chester County. The grain will be purchased from Chester County farmers. The Chester County Sports Committee, of which Norman M. Wood, Coatesville, is president, also plans to have twenty-five flushing bars constructed. These will be donated to farmers who will accept them.

The Townville Branch of the Crawford County Sportsmen's Council will hold a picnic and field day on Saturday, September 5.

Leading events of the day will include coon dog trials, beagle trials, trap shooting, target shooting, horse shoe pitching, etc. Liberal cash prizes will be awarded to the winners of each event.

The Boynton and Coal Run Rod and Gun Club of Boynton, Pa., Somerset County, is sponsoring an N.Y.A. project to plant game feed and build feeders and game shelters. To date it has planted 19 patches of buckwheat and corn aggregating 105,916 square feet of ground seeded. The feed was planted mostly back in the mountains, in places where game is known to frequent. A portion of the seed was sown in patches near the town of Boynton to be harvested and carried into game territory later in the fall.

In addition to the large amount of grain planted they have started building feeders and plan to place them, together with suitable shelters, over a large area of nearby townships. The club has received 100% co-operation from local farmers.

In several instances landowners have promised to leave a portion of their own crops stand so that the club can devote its time to other sections where no farms are handy. This earnest effort shows what a wide awake small club can do.

The Venango County Rod and Gun Club will hold their Field Day this year at Bullion Harvest Home Grounds, 12 miles south of Franklin, on Saturday, September 12. Pistol, rifle and shotgun matches will be held along with skeet, bait and fly casting contests. Coon, rabbit and bird dogs will also vie for honors at special field trials.

### SPORTSMEN'S FIELD DAY

The Mechanicsburg Sportsmen's Protective Association, and the New Cumberland Sportsmen's Association are holding a Field Day, Saturday, September 19, 1936, at the Kilmore Meadow, Lisburn, Cumberland County.

The events planned for will include all types of clay bird shooting, wildcat trap, small bore target, pistol shooting, running deer target, bounding rabbit target, fly and bait casting for both distance and accuracy and exhibitions put on by national champions.



# HERE WITH THE SPORTSMEN

## MORE DUCKS ON NESTING GROUNDS, BUT NOT ENOUGH, SAYS GABRIELSON

Dr. Ira N. Gabrielson, Chief of the U. S. Bureau of Biological Survey, in a recent address [at Chicago, Ill.] before the Illinois Sportsmen's Association, urged continued stringent restrictions for several years on the hunting of ducks and geese. He said this year is the first time estimates by the Biological Survey have shown an increase over the previous year in the number of birds returning to their northern nesting grounds. Other estimates made by conservation organizations and interested groups agree substantially with those of the Survey.

Last fall the open season was shortened to 30 days with heavy restrictions on bag limits, the taking of certain species, and methods of hunting.

"The drastic restrictions put into force last year," explained Dr. Gabrielson, "were intended to cut down the kill by hunters, and they accomplished that purpose. Only by restricting the kill will we be able to send more birds back each year to our newly created breeding grounds and to the Canadian areas where breeding birds are still deficient.

"We have a fair chance of restoring the migratory waterfowl flight to great numbers if the hunters will be sportsmen enough to stand for a restriction of the season."

A field trial for Coon Hounds will be held Labor Day, September 7, at Eagle, Pa. Applicants should communicate with Mr. W. D. Rodgers, Uwchland, Pa.

## COULD THIS BE YOU?

Are you an active member  
The kind that is liked so well,  
Or are you just contented  
To wear a button on your lapel?

Do you attend the meetings  
And mingle with the flock,  
Or do you stay at home  
And criticize and knock?

Do you take active part  
To help the work along,  
Or are satisfied to be  
One who just belongs?

Come to the meetings often  
And help with heart and hand,  
Don't be just a member,  
But PLAY with the band.

Think this over, Brother,  
You know right from wrong.  
Why not be an active Member  
Instead of one who only does belong?

And here is the opportunity  
To get back into the fold,  
Promise to attend that meeting every month,  
And on your organization you'll be sold.  
—"The Wandering Indian"

The Federated Sportsmen of Lancaster County will hold their annual ox roast on September 20, on the P.R.R. grounds. A big program of events has been scheduled.



Bow and arrow enthusiasts of Western Pennsylvania at recent meeting held at the Gibson Archery preserve, Kellettville, Pa. Female devotees looking over their scores.

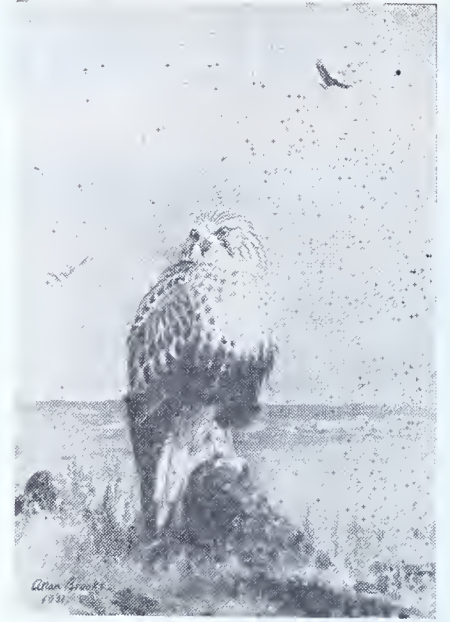


Archery is fast becoming a popular outdoor recreation in the Keystone State. Sportsmen in competition on the Gibson Reserve.



Members of the Columbia Fish and Game Association, Columbia, Pa., reared over 600 ring-neck pheasant chicks for liberation this season. The above photo shows a portion of one of the rearing pens on their club grounds.





## BIRD-LORE

Few people know even our commonest hawks either at rest or in flight. The accompanying photographs, loaned through the courtesy of



Marsh Hawk



Red-tailed Hawk



Gosawk

the National Audubon Society and More Game Birds in America, show their perching and flight characteristics, and their wing and body outlines. Photos of other species will appear in future issues.

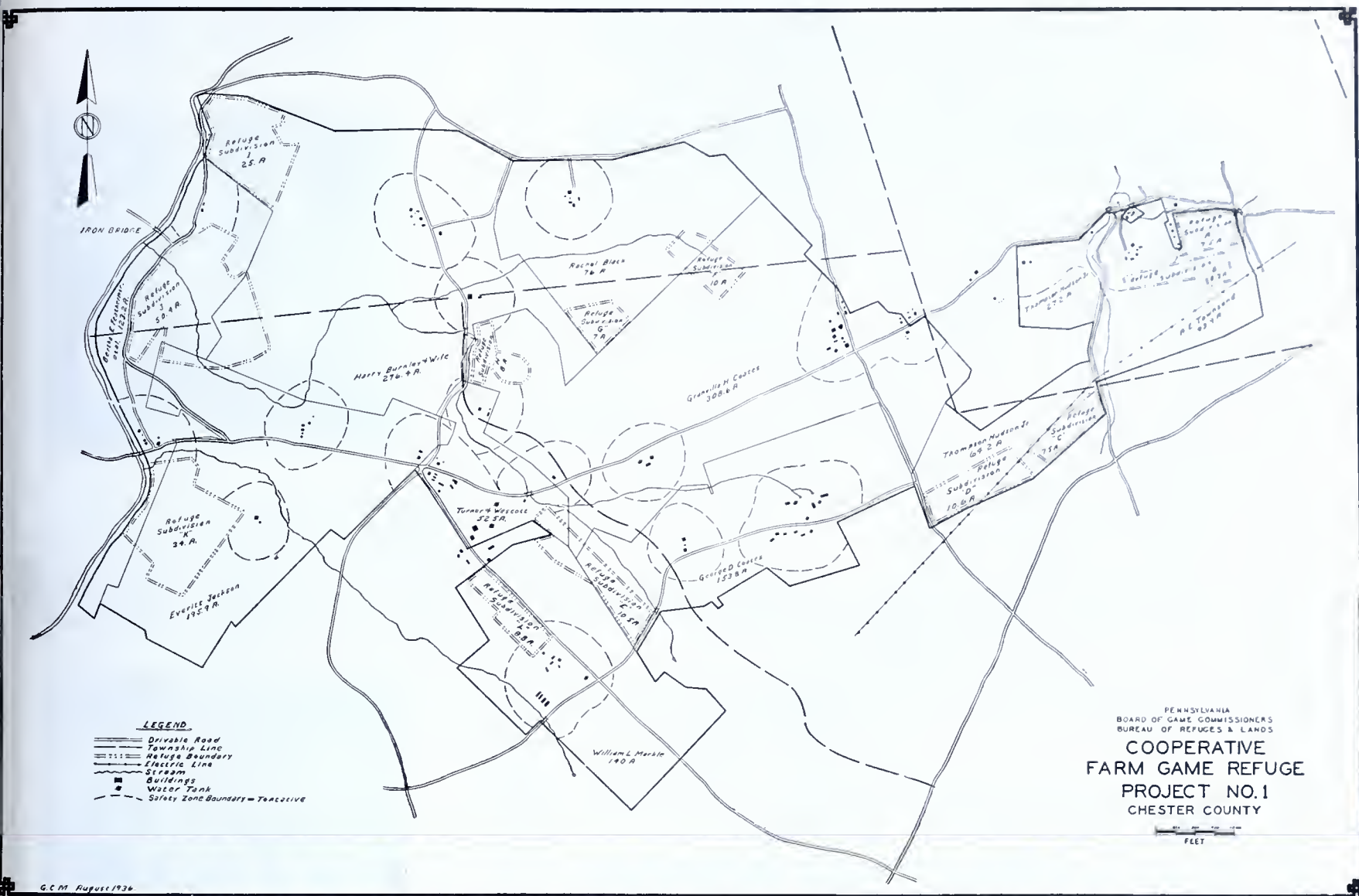


Red-shouldered Hawk



Sparrow Hawk





Outline map of Farm Game Project No. 1.  
See text on page 6.

## WHIP-POOR-WILL—NIGHTHAWK

By DR. GEORGE N. SUTTON

### CAMOUFLAGE IN THE ANIMAL KINGDOM

(Continued from page 19)

hounds knows that the bobbing of the white tail of the common little Cotton-tail rabbit impairs the accuracy of the hunter's aim. It serves to destroy the unity of the target, making the shot more difficult. This at first may seem to be paradoxical to the reader, as it did to me; but on my first rabbit hunt I was thoroughly convinced as to the soundness of the theory. Similarly, the white flag of truce, so conspicuously displayed by the retreating White-tailed Deer, instead of being a beacon to draw the aim of the hunter, serves to obliterate the target.

So, even though the word camouflage has sprung into prominence very recently, this art had reached a great degree of perfection in nature long before anyone had ever heard of the term.

A collector from California found a fine specimen of kangaroo mouse in a hawk's nest. He coveted the specimen for his collection so he carried it away. Later he worried for fear the young hawks would go hungry so he returned to the nest with five field mice.



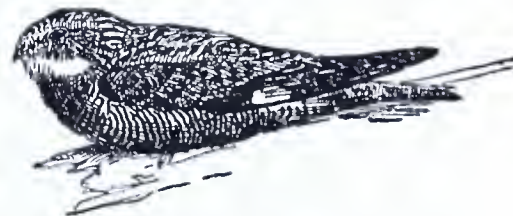
Whip-poor-will

rods farther on, and drop again to the ground. The well-known song, which is given with such constancy and fervor on spring and summer nights, may be written **chuck, whip-poor-wee-ah, chuck, whip-poor-wee-ah**. Sometimes the song is repeated two hundred times or more without cessation.

The mouth of the Whip-poor-will is lined with long hairlike feathers which protrude in front of the bill, a distinguishing characteristic which is absent in the Nighthawk.

The Nighthawk is a familiar bird of summer evenings, when even over the cities, it circles back and forth, calling as it hunts its insect food, **pee-ah, pee-ah**, in a rough, grating voice. In spring it courts its mate by plunging rapidly downward on set wings, producing with the vibrating primaries a booming sound which has given the bird the nickname "Bull-Bat." It is one of our most beneficial birds. During the day it sleeps or rests on the ground, or sits lengthwise on a horizontal branch. It has recently taken to laying its eggs on gravel-roofed buildings in the city. Young Nighthawks, equipped as they are with strong feet, can run nimbly. The parents, though able to fly well, have lost much of the power of their foot-muscles and can scarcely walk.

The Nighthawk is readily recognized by the white bars which are prominent markings on the under primaries of the wings. The tail also has a white bar across all but the middle feathers.



Nighthawk

**M**ANY people cannot deferentiate between the Whip-poor-will and the Nighthawk, although there should be no difficulty in so doing.

The Whip-poor-will is never seen flying high in the sky, and the absence of white spots in the wings distinguishes it from Nighthawk. To find the Whip-poor-will one must go to the deep woods where, in a quiet tangle of ferns and bushes, a dark brown, silent-winged creature may fly from the leaves, to flutter a few



# 1936 Seasons and Bag Limits

## 9:00 o'clock hunting on First Day Only

Below is a summary of open seasons and bag limits provided by State and Federal statutes and by resolution of the Board of Game Commissioners, under date of July 1 and 2, 1936, as provided under authority of Section 509 of the Game Code as amended. The open season includes both dates given, Sundays excepted, the small game and trapping seasons, except waterfowl, beginning at 9 A.M. on the first day only.

UPLAND GAME (Small game possession limit 2 days' bag)	BAG LIMITS Day	OPEN SEASONS Season
*Wild Turkey (See counties closed below)	1	1
Ringneck Pheasants, male only	2	8
Ruffed Grouse	2	8
Bobwhite Quail, Gambel Quail, Valley Quail (the combined kinds)	4	20
Blackbirds		Unlimited
Rabbits, Cottontail	4	20
Squirrels, Gray, Black and Fox (the combined kinds)	6	20
Squirrels, Red	Unlimited	Nov. 6-Aug. 15, 1937
Raccoons, all counties, by individual or hunting party	2	10
Bear, over one year old, by individual or hunting party	1	1
Deer, Male with two or more points to one antler	1	1
Deer, Male as above, by hunting party	6	6

NO OPEN SEASON—Hares (Snowshoe or Varying), Reeves Pheasants, Hungarian and Chukar Partridges, Elk, Antlerless Deer, and Cub Bears

MIGRATORY GAME (Possession limit one day's bag)		
Rails, except Sora	15	Unlimited
Sora	25	Unlimited
Gallinules	15	Unlimited
Woodcock	4	20
Sniipe, Wilson or Jack	15	Unlimited
Wild Ducks (See protected species below)	10	60
Wild Geese (Brant closed)	4	30
Coots or Mudhens	15	Unlimited

The species of waterfowl on which there is no open season are Red-head Ducks, Canvasback Ducks, Wood Ducks, Ruddy Ducks, Buffle-heads, Swans, Snow Geese and Atlantic Brant. No baiting or live decoys.

Magazine shot guns limited to three shells at one loading.

A FEDERAL DUCK STAMP IS REQUIRED OF EVERY MIGRATORY WATERFOWL HUNTER MORE THAN SIXTEEN YEARS OF AGE. STAMPS ARE ON SALE AT POST OFFICES.

### HUNTING METHODS AND RESTRICTIONS FOR TAKING MIGRATORY BIRDS

Migratory game birds may be taken with shotgun only, not larger than 10-gauge. Repeating shotguns to hold not more than three (3) shells. The magazine may be cut off or plugged with a one-piece metal or wooden filler incapable of removal through the loading end, to reduce the capacity of the gun to three (3) shells at one loading.

Use of blinds and aid of dogs permitted.

The use of live decoys and sinkboxes and use or aid of any automobile or aircraft of any kind is prohibited.

Any boat or floating craft propelled by hand power is permitted, but the use of any power boat, sailboat or other boat under sail, and any craft or device of any kind towed by power or sailboat, is illegal.

No baiting of waterfowl is permitted.

No aircraft, power boat or floating device of any kind may be used to concentrate, drive, rally, or stir up waterfowl.

Waterfowl and coot may be hunted between 7 A.M. and 4 P. M., standard time, only. On all other migratory game birds in season, including rails, snipe, woodcock, etc., shooting is permitted between 7 A. M. and sunset.

Migratory game birds may not be possessed longer than ten (10) days after close of the season.

### FUR-BEARERS (Traps not to be set before 9 A.M. the first day)

Minks, Opossums, Skunks	Unlimited	Nov. 6-Feb. 28, 1937
Muskrats (by trapping only)	Unlimited	Dec. 1-Mar. 15, 1937
Beavers (by trapping only)	3	Mar. 1-Mar. 15, 1937

### NO OPEN SEASON—Otters

\*No open season on Wild Turkeys during 1936 in Berks, Bradford, Bucks, Cameron, Carbon, Clarion, Clearfield, Dauphin, Elk, Fayette, Forest, Jefferson, Lackawanna, Lebanon, Lehigh, Luzerne, Lycoming, Monroe, Northampton, Pike, Potter, Schuylkill, Tioga, Warren, Wayne, Wyoming and York Counties.

### GROUPS HUNTING SMALL GAME

In the interest of safety, the Commission recommends that parties hunting small game be limited to five (5).

## PROPERLY AND IMPROPERLY STRETCHED SKINS

From text on Page 8



No. 7, Opossum. No. 1 Neat, trim and well-handled. No. 2 removed from board too soon; flesh on side shrinks skin out of shape. No. 3 poorly handled, placed on board carefully, note both tail and front leg show on same side of skin. No. 4 Dog bit and stretched on wire stretcher; originally same sized skin as No. 1; note bloody back, and strings used to tie legs down on stretcher.



No. 9, Muskrats. There is a terrible waste in the handling of muskrats. No. 1 is what could be called a perfectly handled skin, No. 2, commonly called well handled, but note triangular back also belly flap showing; cannot be nailed out square at hips as No. 1. No. 3. The cat chewed the head off then he skinned it. No. 4. He hung it up where the dog could reach it. No. 5. Narrower at the hips than at shoulder. No. 6. Long straight sides and wedge-shaped head. No. 7. Wedge-shape from head to hips. No. 8. Short and stubby; every bit as large as No. 1, but must be bought as a medium sized skin. No. 9. Turned fur side out, usually mold, always wrinkle, and arouse a suspicion of being a damaged skin. These skins were all average large skins originally. They graded out as two large, five medium, and two damaged.

A Silver Pheasant cock, owned by an English sportsman, lived over twenty-seven years. A rabbit, rescued from a stoat, was kept by an English woman for seventeen years. The animal was in perfect health.

Prior to the days of drainage and drought the fur industry in North Dakota provided a cash income well over \$2,000,000 annually, principally through the sale of muskrat and mink pelts. Restoration of wildlife refuges encourages the propagation of fur animals and the stocking of other areas where the animals may be trapped.



PENNSYLVANIA  
 BOARD OF GAME COMMISSIONERS  
 BUREAU OF REFUGES & LANDS

# STATE GAME LANDS

## NO 117

WASHINGTON COUNTY

20000 10000 5000 0 5000 10000 20000  
 FEET



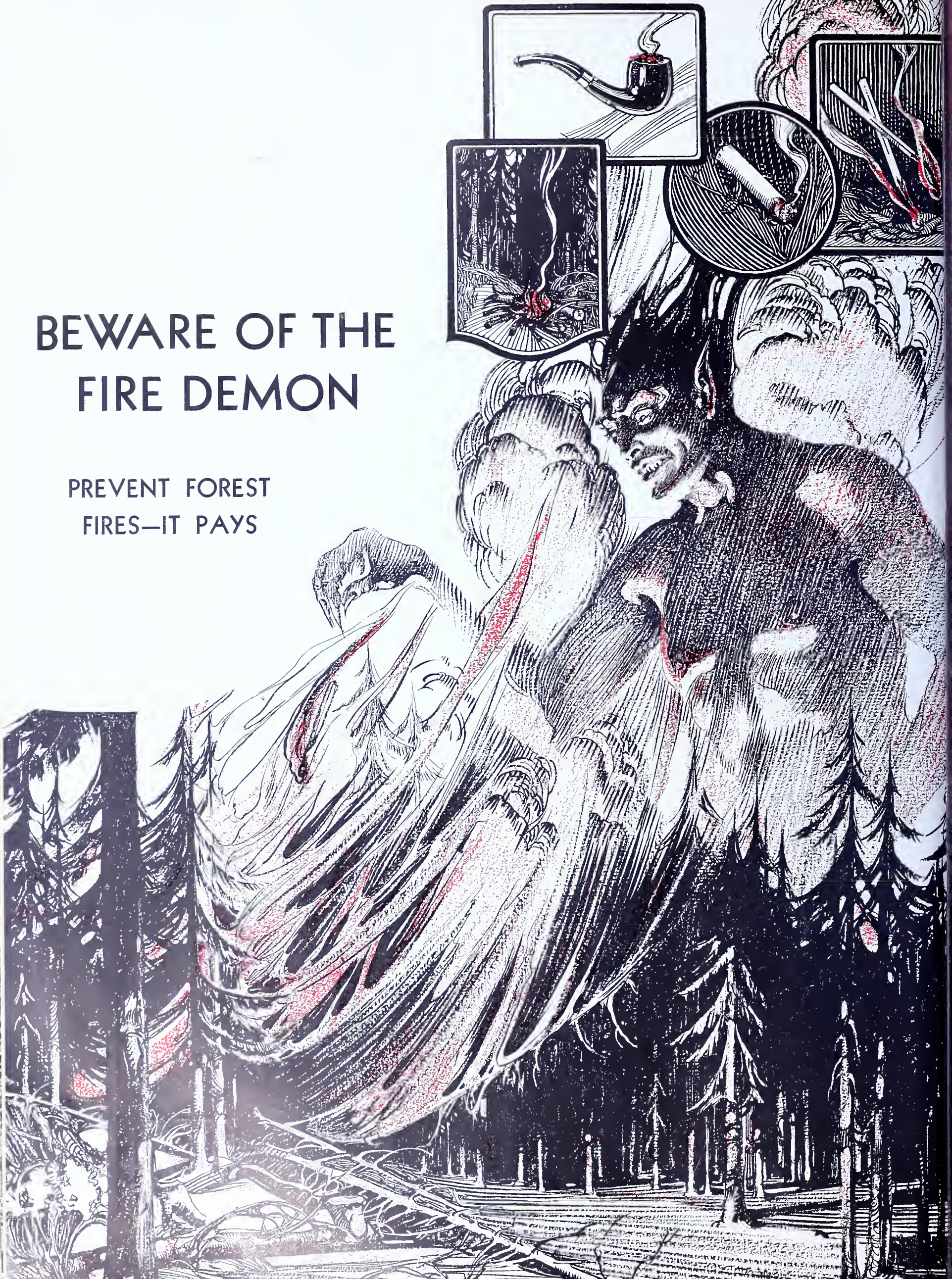
**LEGEND**

- Divide road
- Non-divide road
- Boundary line
- Section line
- PA road
- Stream
- Spring
- Church



# BEWARE OF THE FIRE DEMON

PREVENT FOREST  
FIRES—IT PAYS





# PENNSYLVANIA GAME NEWS



OCTOBER, 1936  
TEN CENTS



# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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# EDITORIAL

VOLUME VII

OCTOBER, 1936

NUMBER 7

## THE 1936 REGULATIONS

**R**EDUCING bag limits and shortening hunting seasons have long been accepted methods for conserving the game supply. In fact, until comparatively recent years they were about the only known methods, and especially when quick action was needed.

This year the Pennsylvania Game Commission was confronted with a difficult problem. Quick and courageous action was imperative; the Commission assumed its responsibility and reduced bags and seasons for all species to assure a future breeding stock.

The majority of Pennsylvania's sportsmen, and estimable conservationists and scientists elsewhere, lauded the Commission's courage and foresight. Only a comparatively few objected.

But let us review the situation a bit. During the 1935 hunting season the largest army of hunters ever to take the field in this or any other state was hunting in Pennsylvania. More than 600,000 residents bought licenses, and slightly over 8,000 non-residents came to Pennsylvania to enjoy the fun with us. In addition, at least 100,000 farmers and their boys hunted legally without licenses, a total army of almost three-quarters of a million in pursuit of game and fur-bearers. The kill was very heavy.

Then came the tragic winter of 1935-36. The first heavy snows fell in November; from then to the end of March cold rains, sleet storms, heavy snows, with sub-zero weather, decended with appalling regularity. Extensive feeding programs alone saved the remnants of our breeding stock.

It was squarely up to the Game Commission to restrict hunting during 1936 to the prospective game increase, and not one bit more. Most of those who have complained about the 1936 hunting seasons have placed their own pleasure and convenience foremost. Many of them labored under misconceptions concerning the methods by which the Commission decided upon the regulations, even to believing the opening date was delayed to force everybody to vote in the elections.

Now here is how it was done: Throughout the winter officers of the Commission and interested sportsmen were constantly keeping close check on the havoc wrought by the severe winter. When the breeding season arrived such checks were intensified, and reports were submitted to the offices of the Commission. Field captains were brought in for a conference.

All of those reports were later analyzed and weighed by the Commission. It was decided that the season for small game should be not over about three weeks, and that since Thanksgiving is a traditional hunting holiday it should not close prior to November 26, preferably a day or two later.

This conclusion having been reached, it was simply a case of figuring back to ascertain when the season should start. The hunters in the northern part of the State wanted an early season; those in the southern part wanted a later season. When the Commission proposed to open the season on Election Day, a holiday, a terrible uproar ensued because of the danger involved when large numbers of hunters crowd into the field at the same time, also the resentment among landowners to large crowds. Most of the objectors held the season should be even less than three weeks. The Commission yielded and opened the season November 6, and closed it three weeks later.

When the Commission announced that on the open-

ing day the hunters must wait until 9:00 A. M. to begin shooting, in order to save human life to bring about improved relations with the landowners, many hunters got the impression that this would apply every day. Naturally they objected, but when they found it applied to the first day only they withdrew their complaints. **And who wouldn't forego two hours of shooting if it will save just one life?** The Game Commission believes, based upon last year's experience, that this change will save many from being injured or killed.

It is sincerely felt that if the sportsmen of Pennsylvania will give the 1936 regulations a fair trial, hunt for sport and not for meat, and that those who insist upon being game hogs are punished, it will not be necessary to have stringent regulations next year.

## JUSTICE

**S**PORTSMEN and landowners, particularly, should be gratified at the justice which was recently meted out to several irresponsible hunters who were found guilty in the Cumberland County court for having brutally beaten an elderly farmer when he ordered them from his land last Fall.

As the case now stands, one of the individuals was fined \$25.00 and sent to jail for one year; another filed motion for a new trial, and another was found not guilty and ordered to pay one-third of the costs.

This kind of justice will go a long way toward eliminating roughneck hunters and cementing a closer bond of friendship between farmer and sportsman.

We have always felt that posted lands mean little to the individual who does not respect the property of his fellow man, and individuals of this kind will trespass whether there are notices posted or not. We often wonder whether it would not be far better for farmers generally to open their property to the real sportsmen, for by so doing they will automatically limit the possibilities of encroachment by undesirable hunters. No vandal will tread upon ground where good sportsmen are in the vicinity.

We hope that all courts will follow the precedent set in Cumberland County and punish such malefactors promptly and severely.

## GAME FEEDING

**N**OW is the time to erect feeding shelters and feeding stations. Get them started early so that game will know where they are located. Do not wait until snow covers the ground, as it is only by the merest chance that feeding shelters established at such a time will be found and visited regularly.

Sportsmen's organizations, members of the National Youth Administration, members of the CCC camps, Boy Scouts, and others interested in the preservation of wildlife should begin surveying their local districts immediately to determine the most logical places to feed game during winter and to construct shelters as substantially as possible so they will withstand the ravages of the elements.

Different locations require different types of feeding shelters, all of which are outlined in various publications published by the Board, and it is suggested that those organizations or individuals who wish to begin an early feeding program write this office immediately for all available literature.

It is also suggested that contact be made with the local Game Protector whose assistance will be invaluable in helping make a survey of the localities where feeding will be most essential.



# THE SPORTSMAN AND THE LANDOWNER

By JAMES H. HARRIS



Disregard of the rights of the landowner quite often leads to posting of "No Trespass" notices.

**F**OR a great many years there has been a certain amount of misunderstanding between farmers and landowners and sportsmen in Pennsylvania concerning hunting on the lands of the former. This misunderstanding must have existed away back in Colonial days, as evidenced by the fact that the first game law enacted in what is now the State of Pennsylvania, by Sir William Keith, Baronet, Governor of the Province of Pennsylvania, contained a section imposing a penalty of ten shillings "to carry any gun or hunt on the improved or enclosed lands of any plantation other than his own, unless he have a license or permission from the owner of such lands or plantation." It would appear that abuses of the privilege of hunting on private lands had crept in even during that early period.

I believe I am familiar with the viewpoint of both the average sportsman and the average farmer, and it seems to me that their difficulties are not so great they can't be corrected. I was born on a farm and spent the first nineteen years of my life there. A great deal of my time since that has also been spent among the people of the rural sections. I know from this experience that most farmers are very fair, and I believe they will be willing to go more than half way in making friends with the sportsmen.

Our farm consisted of about a hundred acres in one of the very good quail counties. We always had several coveys of quail and

plenty of rabbits. Although the hunters were not as numerous then as they are now, there were always several on our farm during the open season.

The reason why difficulties arise between the farmer and sportsman are numerous. Let me cite some from personal knowledge. My father and a hired man were husking corn and two hunters, obviously from the city, came into the field with bird dogs. My father, thinking that the hunters may not see them, called to the hunters to be careful where they shot. In just a few minutes a covey of birds flew up directly toward my father and bang! bang! The result was that he was shot in the shoulder—not seriously it is true—but he is still carrying some of the shot grains. Even to have shot grains rattle in the corn fodder is enough to make one nervous. If you don't believe it, try sitting on a corn shock and let someone shoot toward you.

We had a number of stone fences on the farm, relics of the days when the land was cleared. These were built up nicely and served as wonderful havens of safety for pursued rabbits, and places into which groundhogs could duck quickly out of sight. After each hunting season great holes in these fences attested to the thoughtlessness of some hunters. These places, of course, had to be mended, which took time and patience, and which didn't increase our love for hunters. In their eagerness to get the

bunnies the hunters tore out the stones, throwing them back in the field in many instances. Where we had wire fences we found them cut or bent down. Instead of crossing the fence at a post some crossed it anywhere.

These and other things are responsible for the farmer posting his land. Some hunters go so far as to shoot chickens, guineas and other property. They hunt close to the dwellings where children are playing. Another thing which the farmer resents is a great crowd of hunters with several dogs spread out in a field and who shoot at everything in sight.

## RESPECT THE LANDOWNER

I have learned since leaving the farm that there is more than one kind of hunter. We used to put them all in one class, or if there was a subdivision of hunters it was "city hunters." The division should be "sportsmen" and hunters. I have found that practically all are in the class of sportsmen but unfortunately there is the small percentage which cannot be classed as such. It is these who make it bad for all. They are the ones that antagonize the landowner and make him resentful of all hunters.

One thing which complicates the situation is the fact that, by court decisions, ownership of game is vested in the public; it is owned by the whole people, whereas the land may be owned by the State, Federal Government or privately. This is different from most if not all other products, the ownership and control of which goes with the land. The hunter therefore has a part ownership in the game, but someone else owns the land on which the game may be found. If the landowner sees fit he has the legal right to keep the hunter off his land. This he is quite liable to do if he has been imposed upon by some other thoughtless hunters.

It is not unlike the position of the small boys playing baseball in the vacant lot in the village. One of them bats the ball into Mrs. Jones' yard. There it is, the ball belongs to the boys but the land is Mrs. Jones'. The boys know from past experience that Mrs. Jones is opposed to ball games and to boys in general. They also know that the only way to get their ball is to go to the front door and as politely as possible say, "Mrs. Jones, please can we get our ball." Nine times out of ten they get that permission and likewise nine times out of ten the reason that Mrs. Jones doesn't like boys is because one of them at some time or other threw a ball through her window and then ran. The boys know when they go after the ball that she won't let them or any other



# MAN and OWNER

ORTON

boys in again if they break down her fence, let her gate open or fill their pockets full of turnips on the way out.

The same thing holds true with the hunter and the landowner. The game belongs partly to one and the land to the other and if all hunters would learn to have more respect for the rights of the landowner there would be more of a welcome extended to hunters. The man who owns the land must be given proper consideration. If he has his land posted it is probably because, like Mrs. Jones and the boys, someone shot a chicken and then fanned his coat tail.

I would, therefore, in the interest of better relationship, suggest the following to sportsmen:

At each sportsmen's meeting stress the necessity of courtesy on the part of all members of the organization. Let each one assist the landowner in punishing those who do the things which aggravate the landowner. This would include such things as shooting chickens, tearing down fences, shooting in the direction of persons working in the fields, etc.

Visit the landowners in your favorite hunting territory before the season opens. Very often the right kind of sportsman is on good terms with the antagonistic landowner and enjoys the right to hunt. A good way to get on good terms is to drop in and discuss problems with him before hunting season. In this connection it may be possible to suggest things which the farmer can do to better game conditions. It will at least show an interest in game aside from the shooting of it and an interest in the farmer's problems.

Don't take two or three carloads of men with half a dozen dogs into a field and expect the farmer to like it. He won't. This is destructive and disturbing to both the game and often domestic stock. Everything possible should be done to discourage this practice. Not more than four and preferably less should be in a party.

## CAN HELP EACH OTHER

On the other hand the farmer should remember that there are two kinds of hunters. Only a very small portion will do any damage. He should always permit those who request it the right to hunt. He should not keep off all the good hunters because someone killed the pet squirrel. The thoughtless ones are not very numerous and the chances are that they will sneak on when the farmer can't watch them. By permitting the ones who come to the house and ask he is enlisting help in protecting his property from the very few who might do wrong.

Occasionally a farmer gets riled because someone shoots into a covey of quail. Well, the chances are that that farmer has already done a lot more harm to the quail by cutting the last bunch of brush or briars which furnish the cover and food for other coveys, than the hunters did by shooting at them. The sportsmen can very often sit down with this farmer and show him how he can have more quail and yet permit hunting. While the farmer is always interested in feeding game, yet many times he does not realize the harmful effects to game of certain farm practices. A great deal of the winter feeding is done by farmers and folks in the rural communities.

The farmers and orchardists should keep in mind that it is the sportsmen who provide the funds which furnish most of the protection to song and insectivorous birds. The game protectors enforce the law protecting these birds just as they do the laws affecting game birds and animals. It is difficult to estimate the value of these birds in consuming weed seeds and injurious insect life, but the amount each year is very great.

For the best interests of all concerned there should therefore be close cooperation between the landowner and the sportsman. Until we have better cooperation complaints will continue to come from the farmer about things hunters do which they should not do and complaints will be heard from the sports-

men that they have insufficient places to go hunting. Now is a good time to start bringing about that cooperation. The sportsmen would do well to make the first move by going out and talking it over with the landowner, especially where the posters appear each year just prior to the hunting season.

Sportsmen and landowners, particularly farmers, can be mutually helpful to each other with the proper cooperation. The differences between them have arisen chiefly on account of the desire of the landowner to protect his property against depredation by a very few undesirable hunters. The real sportsmen, not knowing why the farmer is antagonistic to all sportsmen, feel resentful toward the farmer. The next time a farmer asks you to leave his place do as he suggests but go back sometime later when he cools off and ask him why he doesn't like hunters. I will wager that you will get an earful about the scoundrel who did so and so a few years ago. Sportsmen, therefore, should join with the farmer and the game protector in eliminating the few remaining pests who cause the difficulties.

The Game Commission's Farm Game Refuge Program, with the posting of Safety Zone notices, now being tried out in several counties of the State will no doubt lead to a better understanding between the farmer and sportsman. Every sportsmen's organization in the territory affected should give this program their whole-hearted support.

Cooperation between the landowner and sportsman means more territory open to hunting by the public.







*Photos Courtesy Williamsport Grit*

Sportsmen's outings arouse interest and promote good fellowship.

## YOUR CLUB AND MINE

By SAMUEL H. CASTNER

**M**UCH has been said about the activities of conservation in general, and especially of the hunting and fishing in Pennsylvania, but little is said of those who have been instrumental in bringing about such activities. I refer to the Sportsmen. When I say Sportsmen, I refer to those who are fond of the out-doors—its trees, woods, streams, as well as its game and fish. And particularly those who are willing to give up their time, and quite often their money, to foster movements to perpetuate the great out-doors, and its sports. Sportsmen enjoy these so much here in our state, and by their efforts they have made it the foremost "Sportman's Paradise" in this country. I am sorry that both time and space does not allow me to name some of those to whom we owe a vote of gratitude for what we now have.

If these fore-runners had not made an organized effort; first, in establishing in our state a Board of Game Commissioners, and a Fish Commission, where would we be today? We would not be so far advanced, nor would we be enjoying as much sport as we now are. Especially does this apply to our hunting. If it were not for the further advancements, due to legislation, etc., brought about by the different Sportsmen's organizations, we would have no hunting at all. Sportsmen's clubs have been increasing for the past thirty years, until now Pennsylvania has what I believe to be the finest type of organization there is—county units, affiliated under one head, and known as the Pennsylvania Federation of Sportsmen's Clubs.

I am sorry to say that I have found some, so called sportsmen's associations, more of a political organization, monopolized and dictated to by a few; others are allowing themselves to drift into this state, which spoils any organization.

I take great pride in speaking

of the Consolidated Sportsmen of Lycoming County, a single organization, county wide. I speak of this organization because I had a hand in its formation, along with many other local sportsmen, who felt we ought to have one local association representing all the sportsmen. To show their good sportsmanship, several gave up their offices in various associations, so as to combine under one head, and thereby brought about one of the largest organizations in Pennsylvania. To do this, we tried to eliminate politicians from gaining office, or to play politics in any way. We tried not to be selfish, but to advance ideas and legislation for the good of all the state, and not only for ourselves or our section.

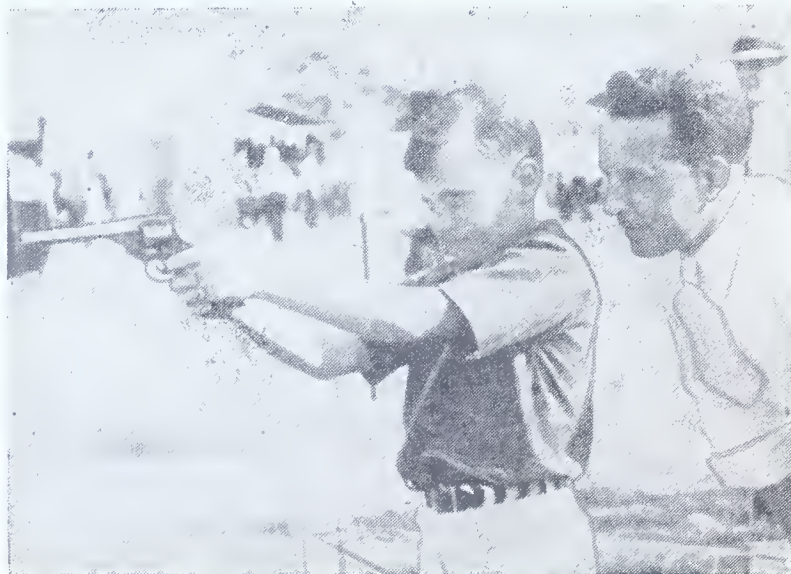
The secret of the success of this organization was: first, choosing for its officers, men who enjoyed such work—those who enjoy it as a hobby. Especially is this true of the President and Secretary, as they are the principal ones to keep the ball rolling, and should not be chosen merely because they are good fellows or influential.

They are the ones who should get the kick out of it.

The second secret is to find as many jobs or offices as possible, and to make as many men responsible for some part of the organization work as you can. The more you can get interested in this way, the better. Third, have good by-laws, but ones flexible enough to meet any emergency that may come up, and see that they are lived up to.

The Consolidated Sportsmen of Lycoming County have a membership of over two thousand. It has a President, Vice-President, a Regional Vice-President in each of the boroughs in the county, a Secretary and a Treasurer. It also has an Executive Committee, empowered to conduct all business of the association, with or without the Directors.

(Continued on page 24)



**Learning from Dad**

Sportsmen teach their sons how to handle firearms at an early age.





Young Wild Turkeys

# A NEW WILD TURKEY PROGRAM

By WM. G. FLUKE

**A** MORE noble bird never roamed the rock rimmed ridges of America than the wild turkey. No feathered game is hunted more assiduously or with greater expectancy than this nimble-legged, sharp-eyed, keen-eared creature of our mountain slopes.

No wild bird or mammal is more zealously protected than this gorgeously colored, elusive creature of our woodlands.

Our earliest literature acclaims it in numerous and inspiring narratives, and in the lives of the Indians and our Pilgrim Fathers it played an important part.

Early Pennsylvania woodsmen considered it the finest of our native game birds, and the decimation of its flocks caused great consternation among the old time hunters.

Wild Turkeys still live in Pennsylvania, and amazing as it may seem, they are apparently gaining a stronger foothold year by year. Through wise seasons and bag limits their numbers have increased tremendously. They have been legal prey for many years, and only on three occasions has it been necessary to close the hunting season on them.

Its present range includes: Union, Snyder, Huntingdon, Mifflin, Juniata, Perry, Franklin, Fulton, Bedford, Somerset, Blair and Centre Counties, Southern Lycoming County, and portions of Clinton and Cumberland, although a few are found in other parts of the state.

For years far-sighted game officials and sportsmen advocated various programs for insuring greater protection for them, but for some reason or other action was delayed, or failed to germinate, and it was not until two years ago that small refuges

were established in the heart of the wild turkey country to further safeguard this popular game species. Today there are over fifty of these refuges scattered throughout the turkey country and additional sanctuaries will be established as time and money permits.

To further supplement the natural increase of birds from these refuge areas the Game Commission, in 1929, established a wild turkey farm in the heart of Juniata County, securing only the most genuine wild strain possible as the nucleus of their breeding stock.

Unusual success was attained in the propagation of these birds, but the subsequent release of them in the wild was in many cases unsatisfactory. The turkeys, hand reared as they were at the farms, did not acclimate themselves readily and from time to time they left even the remote sections where they were liberated and wandered into the farm lands of adjoining valleys.

Every effort was made to accustom them to their new environment, and while in some cases success crowned our efforts, it was the exception, and not the rule. Even a well regulated program of feeding in the areas in which the birds were stocked did not wholly serve to hold them.

However, the Board at its November, 1935, meeting authorized those officials of the Commission who were interested in conserving the turkey to carry on an additional experiment pertinent to the problem. After studying the problem from all angles, it was finally decided to create small holding areas within three turkey refuges. In these areas were placed a certain number of turkey hens from the Game Farm, in numbers consistent with the amount of available cover and food supply. The areas were fenced to keep out four-footed vermin and precautions were taken in an effort to offset the depredations of the Great Horned Owl in sections where these and other winged predators were prevalent.

Due to the deep snows which delayed the preparation of holding pens, some of the hens had already mated, although others had not. These hens were placed in the holding areas with the idea of attracting native Toms and thus insure wilder progeny.

(Continued on page 23)

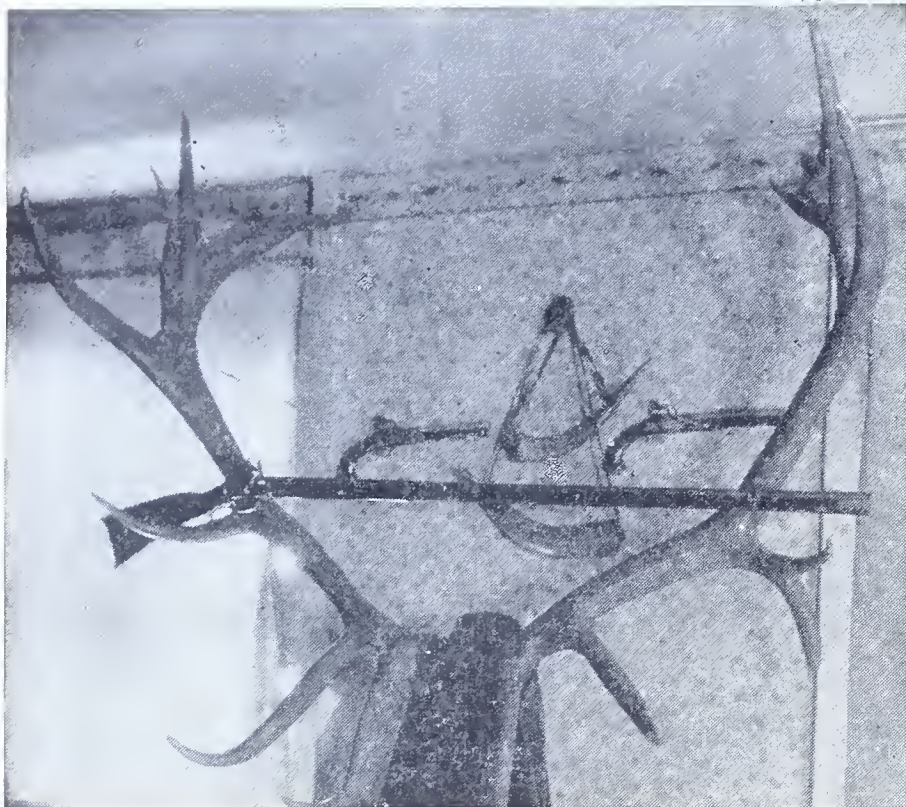
## Game Officials at Wild Turkey Conference

Top row: Left to right—Judd Turner, Asst. Secretary; Elmer Alexander, Refuge Keeper; Wm. J. Davis, Div. Supervisor; John Fenton, Refuge Keeper; Henry Metzger, Acting Refuge Keeper.

Bottom row: Left to right—Ralph McCoy, Game Protector; James N. Morton, Asst. Director Bureau of Refuges and Lands; Charles W. Wessell, Chief, Div. of Propagation and Game Farms; W. G. Fluke, Member of Game Commission; Richard Gerstell, Chief, Div. of Game Research and Distribution; Seth Gordon, Executive Secretary; Ray Kauffman, Refuge Keeper; Leon P. Keiser, Farm Superintendent; Frank Myers, Div. Supervisor; Ross Metz, Refuge Keeper, and Samuel H. Price, Game Protector.







Native Pennsylvania elk horns

Courtesy J. G. Dillon

**W**HEN the white man first came to North America, the wapiti, or elk, ranged in great numbers over most of the United States and southern Canada. From that time, the species has played an important part in the history of the continent.

Even through the opening years of the eighteenth century, the animals are known to have roamed in varying numbers over almost every part of the Commonwealth of Pennsylvania. They were found in greatest abundance in the mountainous midsection of the State where they inhabited the densely forested areas which were interspersed with beaver meadows and other open glades which frequently surrounded the numerous natural saline "licks." When hard pressed by severe winters and other enemies, they are known to have been driven in large numbers into the lower parts of the Delaware, Susquehanna and Allegheny River basins. Evidence of the animal's former widespread abundance is today found in the appearance of its name in the nomenclature of counties, townships, towns, lakes and rivers throughout the State.

The species of elk native to Pennsylvania was *Cervus canadensis*. Certain of the older records seem to indicate that the animals within the Commonwealth reached a greater size than in any other part of their natural range. Unfortunately, it is impossible to determine the actual facts of this matter, but there remain today many unusually large and beautiful sets of elkhorns which were carried by animals shot decades ago. These racks bear testimony of the mighty monarchs which formerly bugled in the forests of the Keystone State.

Ruthlessly slaughtered for hide and for tooth, the elk in Pennsylvania had shown a great population reduction even as early as 1750, but to accurately trace the history of the extinction of the animal is most difficult in spite of the fact that it is a comparatively recent happening.

The earliest available records are far too

vague to throw much light on the subject, but the writings of Peter Kalm about the middle of the eighteenth century tell the first part of the tragic story. From his works, we learn that elk had been killed in great numbers on the present site of the city of Philadelphia even as late as the middle of the seventeenth century, while from William Penn's writings it was found that shortly after he arrived in Pennsylvania, in 1662, the animals were in that same section not particularly common.

There are numerous eighteenth century records, but few are of especial interest. E. T. Seton in his "Lives of the Game Animals" cites one valuable comparative statement under date of 1760. The report tells of an animal roundup in Snyder County, Pennsylvania during that year wherein 111 buffalo and two elk were taken. Since we have good reason to believe that the original buffalo population was at most not more than five or six times as large as the elk population, we can, accordingly, surmise that even in such favorable territory as was that area now embraced by the Counties of Union and Snyder, the elk had been greatly reduced in number by the middle of the eighteenth century.

Nineteenth century elk records for the State are most abundant and equally incoherent. S. N. Rhoades, E. T. Seton, Theodore Roosevelt and countless minor writers give numerous and somewhat contradictory reports for the period in question. Compiled from all available sources, however, the following paragraphs will give what the writer believes to be the most accurate possible account of the animal's late history.

The opening of the last century found the wapiti exterminated in southeastern Pennsylvania; rare west of the Allegheny River and in the Blue Ridge and Cumberland Mountain Ranges; numerous on the Pocono Plateau; and abundant throughout the Allegheny Mountain and Plateau sections.

By 1830, the archives show that the animals had disappeared from the southwestern section of the State, an area once among

# THE ELK IN PENNSYLVANIA

## ITS EXTERMINATION AND RECOVERY

By RICHARD L. DILLON

their favorite haunts. Extermination in the Pocono Plateau district in the diagonally opposite corner of the Commonwealth was completed between 1835 and 1845.

During the 1840's and up until the early 1850's, a fair number of elk yarded and were annually hunted in those sections of Elk, Cameron and McKean Counties lying between the headwaters of Bennett's Branch of the Susquehanna on the southeast and the Clarion River on the north and west. It was due to the presence of these animals in the region that Elk County received its name when established in 1843.

During the winter of 1852, a herd of twelve elk are reported to have yarded along the Clarion River near the present town of Ridgway. Seven of these animals were taken by two Indian trappers and following their slaughter, a band of native elk apparently never again yarded within the State.

From 1855 to 1865, history tells us that elk were occasionally seen and taken at various points in the north-central part of the State. Steadily pushed back into the wilderness areas, the last survivor in the Black Forest region was taken in 1862. This left only one small area in the State harboring the pitiful remnants of wildlife species widespread throughout the Commonwealth only little more than a century previous.

Along the headwaters of the Clarion River in the eastern half of Elk County the wapiti made its last stand. There, in November 1867, one Jim Jacobs, a full-blooded Indian, killed the last known Pennsylvania elk. It appears that this animal was also the last individual of the species to live in the vast Allegheny Mountain section of eastern North America.

Having traced the history of the extermination of the elk, it is important that the same be carefully compared to the general history of the State. Detailed study reveals the fact that exactly as did the white people's population increase and spread within the Commonwealth, so did the elk population decrease and finally disappear. Swedish colonists, the followers of William Penn and other settlers first populated the southeastern corner of the State whence the elk first vanished. The eighteenth century found a relatively high human population density in southeastern Pennsylvania; an appreciable but lighter density in the upper Ohio River district and through the south central counties; sparse habitation in the northeast; and only an occasional homesteader in the Allegheny Mountain region. As already pointed out, the density of the elk population was at the same time in a condition exactly opposite to that just mentioned. The wapiti rapidly retreated before the constant advance of civilization and were last found in that section which last gave way to settlement.

In 1912 the Pennsylvania Board of Game Commissioners decided to enter upon a program designed to re-establish the elk in Pennsylvania. The release of a number of the animals in the State in 1913 was the first step in the newly adopted plan.

During the spring of the year last mentioned, 72 elk of that same species originally



# SYLVANIA

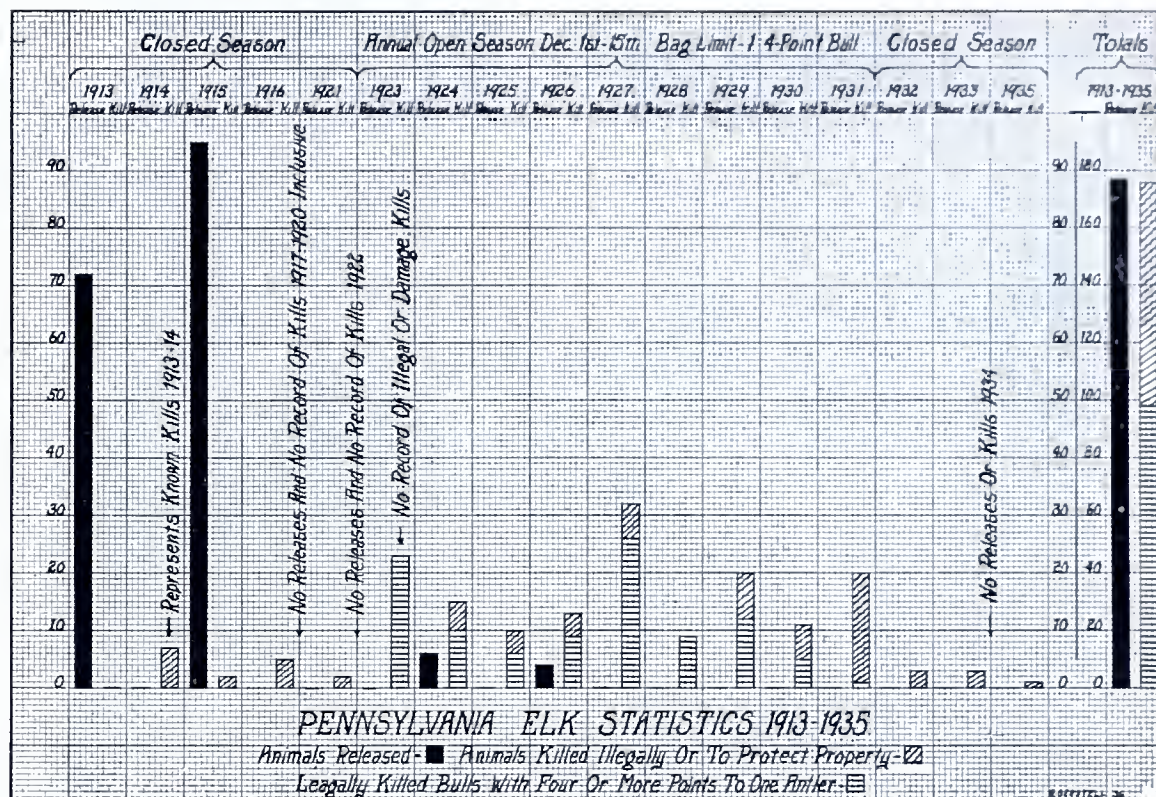
## NTRODUCTION

TELL .

native to the Commonwealth were purchased for restocking purposes. Of the total, 50 individuals came from the Yellowstone National Park in the northwestern Wyoming, while the remainder were obtained from a private preserve in Monroe County, Pennsylvania.

The animals obtained from the West were released in two groups of twenty-five each, one in Clearfield County and the other in Clinton County. Fourteen of these animals, seven from each group, are known to have perished shortly after release, apparently due to the effects of shipment and the climatic changes encountered during transportation. Also, certain of the animals were within one week from the time of release known to have wandered fully forty miles from their liberation site. Of the specimens obtained in Monroe County, twelve were released in the same county and the remaining ten in Centre County. Apparently none of these succumbed immediately following their release, but some of them migrated twenty or more miles within a few days. Four calves were reported during the summer of 1913, while two animals were illegally shot during the fall, a bull in Mifflin County and a cow along the Centre-Clinton County boundary.

No releases were made in 1914, but the animals were apparently thriving. Several reports of elk damage to grain fields were filed with the Commission, while a cow killed in early spring in a grain field in Centre County was found to be with calf. More than eight additional calves were reported seen during the summer and five animals



were known to have been killed in violation of the law during the year.

In 1915 a total of 95 wapiti were obtained from the Yellowstone and were released in the following counties in the numbers indicated: Potter, 24; Cameron, 24; Carbon, 24; Forest, 10; Blair, 7; and Monroe, 6. Again a few animals are known to have perished soon after liberation, but the herds throughout the State appeared to be increasing. Two elk are known to have been illegally taken during the annum.

There was no restocking in 1916, but six animals were illegally killed and elk damage complaints became more abundant.

The damage complaints and the number of elk continued to increase in 1917. During the summer of that year, a herd of from twenty-five to thirty individuals, both young and old, was several times observed in a farming section of Blair County more than twelve miles from the nearest point of liberation.

A survey of the Commission's Annual Reports will reveal the fact that the elk herd maintained an increasing tendency from 1917 through 1920. A few animals were illegally killed during the period, but there remain today no accurate reports as to the numbers so taken.

The first open season for the killing of elk was to have occurred in 1921, but was postponed until the fall of 1923. During 1921 several elk were killed for property damage, but the herds continued to grow accompanied by an increase in the number of farm complaints both in 1921 and '22. For these two years there are available no figures relating to illegal kills.

The open season of 1923 was restricted to that period from December 1st to 15th inclusive, Sundays excepted. Each hunter could legally kill one bull elk with four or more points to one antler, but the ani-

mals could be shot only by still hunting and not by driving. Similar open seasons were annually allowed up to and including the fall of 1931. Since that time the season has remained constantly closed.

In 1923 the hunters legally killed 23 bull elk. The number dropped to 10 the following year and to 6 in 1925, but rose again in 1926 and in 1927.

Six bulls were purchased in South Dakota in 1924 and were released in Elk County the same year. In 1926 four like additional specimens were obtained from the same source and liberated in the same county, but the legal kill steadily dwindled until only one animal was recorded in 1931 and the season was closed the following year.

Presented herewith is a graph which shows the known elk kills and releases annually recorded from 1913 through 1935. Although it is realized that the kill therein depicted does not represent the actual totals for a number of years, and hence for the entire period under consideration, because it has been impossible to check all illegal kills and to obtain a report of all animals killed to protect property, several important facts may be obtained from a careful study of the chart.

First, it will be noted that the records show a total of 177 animals released and 176 killed. In addition to the elk released by the Commission, a few animals were stocked by private individuals interested in conservation practices, but since it is also known that the recorded kills are incomplete, the fact remains that for every animal stocked, approximately one animal was killed. Furthermore, it will be noted that of the recorded kills 56% were bulls with four or more points to one antler legally taken during the open season.

Secondly, the facts just mentioned, although even in them no consideration has been given to fatalities other than those wrought by man and gun, clearly show that the elk originally stocked materially increased in number during those years immediately following their release.

(Continued on page 26)



Reintroduced bull at rest



# CURRENT TOPICS



Game officials in the making—student officers must cut fire trails and clear areas for food planting as part of their field training.

## REMOVE PROTECTION FROM SQUIRRELS IN QUAKER CITY

Protection was removed from squirrels in Philadelphia County by resolution of the Board of Game Commissioners on July 1.

This action was taken because of the material destruction these animals are causing to property in many of the residential sections of the Quaker City, and because the agents of the Commission have been unable to trap and transfer them rapidly enough to relieve the situation.

Every other known means of relief has been attempted. Hundreds of squirrels were trapped from a great many estates both in and adjacent to the city, but the expense in connection therewith did not justify a continuance of this practice.

Since no legal hunting is permissible under the laws and ordinances of the City of Philadelphia, there was no alternative than to remove protection from the animals. They can now be taken at any time and in any manner not forbidden by local laws or ordinances.

A great many of these squirrels are comparatively tame and undesirable for stocking purposes elsewhere, but where they are desirable, and enough of them can be captured to justify the effort, agents of the Commission hope to continue trapping such squirrels for stocking purposes elsewhere.

It will be recalled that in England the gray squirrels introduced there from North America, are considered a serious menace and are treated as vermin.

## STUDY NEW YORK GAME PROGRAM

James N. Morton, Assistant Director, Bureau of Refuges and Lands, and Leo A. Luttringer, Chief of Education, recently returned from an extensive tour of New York State, where they were the guests of prominent New York Game Officials, including J. L. Halpin, Secretary, Conservation Department, N. Marks Bump, Chief of the Game Division, and F. C. Edminster, Game Research Investigator.

Studies were made of numerous resettlement projects wherein lands are being reclaimed and made adaptable, by proper cuttings and plantings, to small game. A visit was also made to Howland's Island, near Syracuse, where New York Officials have established a splendid wild waterfowl refuge. Many ducks were seen, along with grebes, coots, and a number of shore-birds, mainly yellow-legs. A short trip was taken to the experimental grouse farm near Albany where several hundred splendid birds, representing two or three generations, were observed.

New York is far advanced in its research program, and the department, through the special efforts of Mr. Bump and Mr. Edminster, expects to complete very soon a seven-year study of the grouse. Game officials everywhere are eagerly awaiting publication of this scientific treatise.

Two days were also spent attending the summer convention of the Allegheny and New York Sections of the American Forestry Association, of which Mr. Morton is a committee member.

## LICENSES CONSPICUOUS

Hunting licenses this year will show up better in the field than any of those used in previous years.

Plates this year will have a green background with yellow numbers. This combination of colors can be seen at a great distance and will serve both as a safety feature and as a means of identification in cases of violation or vandalism.

The license plate has been one of the most effective means of insuring law observance, and Pennsylvania was the first state to adopt it.

Non-resident license tags will have a background of yellow with black numerals, whereas the alien non-resident licenses will have a light blue background with dark numerals.

The license tags must be worn properly displayed on the middle of the back while hunting. Those who fail to comply with this requirement face prosecution.

## TREXLER MEMORIAL

Construction of a building at the entrance to the Trexler-Lehigh County Game Preserve, to serve both as a museum and a registry place, was included in a number of improvements to the county's show-place approved recently by the Federal Park Commission.

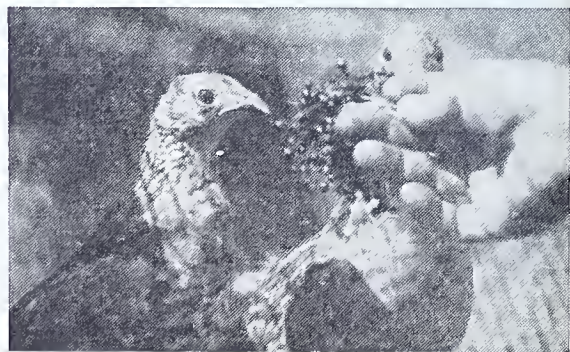
The building is to serve as a memorial to the late General H. C. Trexler, whose generosity made possible the preservation of the park as a public place.

## FIELD TRAINING ENDED

The student officers of the Game Commission Training School recently returned to that institution after a two weeks' assignment among the various refuges where they received instructions in game land management under the direct supervision of the Refuge Keepers.

## BEARS TRAPPED AT EAGLESMERE

A lot of people complained about bears annoying persons living in cottages at Eaglesmere, consequently game protectors got busy and caught two alive in large box traps, and released them in another part of the county. One weighed 300 lbs. and the other 250 lbs.



Ruffed grouse at game farm feeding from attendant's hand.





## ORNITHOLOGISTS MEET

The fifty-fourth annual meeting of the American Ornithologists' Union will be held in the Carnegie Museum, October 19-22. The program will open on Tuesday, October 20, at 10 a. m., in the Lecture Hall of the Museum, and sessions will be held morning and afternoon on Wednesday and Thursday as well. The papers presented will include both technical and popular discussions, and many of them will be illustrated with slides and motion pictures. These meetings are open to the public, and bird students in the Pittsburgh region are urged to take advantage of this unusual opportunity to hear the leading ornithologists of America discuss developments in this interesting field of natural history.

The American Ornithologists' Union has a membership of 2,000, drawn from all parts of the United States and Canada. About three hundred are expected to attend this convention, and a good representation of Pennsylvanians is hoped for. This will be the second meeting of the A. O. U. to be held in Pittsburgh; the first occurred here in 1924.

The annual banquet will be held Wednesday evening in the Hotel Schenley. Dr. George M. Sutton, well known in Pittsburgh circles, will be toastmaster, and an attractive program is planned.

On Friday, October 23, the visiting ornithologists will be given an opportunity to go to Pymatuning Lake to inspect the new wildlife sanctuary and observe waterfowl migration. This excursion is being sponsored by the Audubon Societies of Western Pennsylvania and Sewickley Valley. Anyone who wishes to participate in this trip will be welcome. Details will be announced at the meeting.

A special exhibit for display during the A. O. U. session is a loan collection of memorabilia of Dr. Jared P. Kirtland, pioneer ornithologist of Ohio. This will consist of books, portraits, letters, manuscripts and specimens, and is being assembled under the direction of Mr. Bayard H. Christy of Sewickley. Another special feature will be a collection of Dr. George M. Sutton's original paintings of the birds of Western Pennsylvania.

W. E. Clyde Todd, Curator of Ornithology of the Carnegie Museum and Fellow of the A. O. U., is chairman of the Local Committee of Arrangements; other members of the committee are: B. H. Christy, John B. Semple, George M. Sutton, Ruth Trimble, George B. Thorp, and R. L. Fricke.

## RANDOM NOTES

Dropping an awning in front of the Gompert notion store on Main Street, Pittston, about five o'clock one day, Clarence Burns, night watchman, was surprised to see a deer dart out from the doorway of the store and run up the street.

Dominick Maniccia, of Colver, was driving on the highway between Gallitzin and Loretto a few weeks ago, when a deer ran in front of his car. Unable to stop in time, the car struck the animal.

Maniccia got out to look for the deer, expecting to find it dead. All he found, however, was part of the rack of the buck, which was broken off in the accident.

Game Protector Elmer Thompson was notified, and investigated, but could find no further trace of the animal. A front fender of Maniccia's car was damaged.

A buck deer died in a fall from the top of the canyon-like walls that confine Wapwallopen Creek at Powder Glen, Luzerne County. The buck, apparently, was being chased by dogs.

The Conservation Commission of Iowa appreciates the value of scientific research in finding solutions to their problems, and has entered into a cooperative agreement with the Iowa State College and the United States Bureau of Biological Survey to carry on a study of game management. Demonstration areas are being developed which will be of value in providing better hunting conditions.

(Continued on page 21)

## DR. RUSSELL NAMED CHIEF

Dr. Carl P. Russell, of California, formerly chief of the Museum Division of the National Park Service, was just appointed Chief of the Wildlife Division of the National Park Service, a position left vacant last February through the death of George M. Wright who was killed in an automobile accident.

For the past thirteen years Dr. Russell has been one of the most valued consultants in the National Park Service, and has demonstrated that his views on conservation, ecology, and the integration of policies of wildlife management are well balanced and practical.

## SOCIAL PARASITE

"Parasite" is the designation applied to Iowa's ringneck pheasant hens by Dr. Logan Bennett of the United States Biological Survey, stationed at the University of Iowa. As the result of recent studies of duck-nesting in Iowa, Dr. Bennett has found that this exotic game bird is "ducking" her maternal duties by laying her eggs in the nests of neighboring ducks. Four and seven-tenths per cent of the duck nests studied by Dr. Bennett were so parasitized by pheasants and in a number of cases several pheasant eggs were found in one duck nest.

A group of twenty-six "sportsmen" were caught red-handed recently while enjoying a venison dinner. Full details of the case are not yet at hand, although it is definitely known that five hundred dollars in fines have already been collected.

## LET'S KEEP OUR BOBWHITE AS GAME BIRDS

By NICHOLAS BIDDLE

**I** REGRETTED to read in a recent issue of a sportsmen's publication that some sportsmen feel that the bobwhite quail should be classed as song birds in our State. To my mind, the native bobwhite is the greatest little game bird in our country today, with all due respect to our ruffed grouse and wild turkey, and quail shooting with a good bird dog is the king of sports.

The question of preserving and increasing the bobwhite in Pennsylvania is largely one of furnishing sufficient feed and cover for them in the farming districts of the state. The good quail shooting which is obtainable in the Southern states is due to the feed and protection the birds are afforded in the uncultivated fields and around the edges of the often carelessly cultivated fields.

This type of farming is sometimes referred to as "sloppy" or "nigger" farming, and as such is frowned upon by the thrifty Pennsylvania farmers. I am hoping, however, that the Game Commission will be able to persuade the farmers not to cultivate every inch of their land and induce them to leave a few uncut rows of grain near strips of cover along fence rows, and along the edges of the fields, by proving to them the value of quail as destroyers of harmful insects.

Statistics show that in Pennsylvania the number of quail killed does not depend on the number of birds released, which goes to prove that the more important factor is the environment provided for their nesting, feeding and protection from predators.

There is no doubt that the severe weather last winter was very hard on the bobwhite and it was for this reason that the Game Commission felt it advisable to curtail the open season this year and reduce the daily bag limit to four.

We have raised over ten thousand quail at the Game Farms this year, which will be stocked in depleted areas.

Rather than classify the bobwhite as a song bird, I am looking forward to the day when they will once more become the greatest little game bird in Pennsylvania.





# THE LAST HUNT

By FRED. EVERETT

Sketches by the Author



**K**IKI was my pointer—one of the best pointers a fellow can ever hope to own. She was the kind that sort of crept in under the skin and nestled contentedly in the heart. A one-man dog who couldn't even hear anybody's commands but her master's and who hunted only for him. And the highest type of thoroughbred, daughter of that wonder black pointer, Sporting Black Night. But for all o' that a lovable, anxious-to-please companion in the brush and a real, honest-to-goodness woodcock dog that suited me to perfection. She's gone now.

Please excuse me if I grow a little too enthusiastic but she was the kind of a bird dog to make one do that, even if I did train her myself. For that matter, she didn't need training—she knew it herself. All good dogs are that way. The trouble with us conceited humans is that we think we know it all and don't give enough credit to our dogs and so—we train them—or think we do. A whole lot more would be accomplished if the dogs could train us!

But wait a minute—this is a woodcock story. Yet, how can one start out for woodcock without first having a dog? For the past five years, so far as I have been concerned, Kiki was that dog. That's the way it was last fall during a season which will live long in my memory, first because of the beautiful work of Kiki and second because of the surprising tricks the woodcock pulled on us.

You may remember last fall because of the unusual scarcity of woodcock in many covers which normally teem with them. Take for example Pike County around the section where George H. Ryman trains his dogs. My friend Ray Potter, of the American Museum of Natural History in New York City, who often hunts with Ryman, reported a terrible drought in woodcock.

Now my stamping grounds for the Timber Doodles are here in Rockland County, New York, only a few miles from New York City. We used to have fine woodcock shooting here but ever since Kiki came into my life and I needed birds on which to work her, it seemed that the County was an arid void. Some falls not one bird could be located until the season opened. And even then, the flights were small and hard to find.

But last year, ah! That was different. In all my hunting experience I have never run into so many birds nor had more ideal training and hunting conditions. Why this should be when all around the reports were for scarcity, I don't know. It may be that the path of the flights, for some reason, was changed to bring the birds this way. Possibly the fact that we suffered less from the drought and offered fine cover and good food and soil, had some effect—if the birds could have known about it.

Whatever it was, the Timber Doodles

came my way and I had a dream come true. just imagine going out into your favorite cover and having your dog come to a beautiful point even before you have entered the first batch of brush! And then, in the next two hours, more than sixty points! With two, three and up to five woodcock whistling, darting and dodging up, down, this way and that; sometimes all together; at other times, one after the other, while an astonished statue of lemon and white held staunch! Day after day, one week, two weeks, until the season opened. Then, with the opening day, the flight passed on, leaving enough to fill the bag and one's heart with rare memories for the days and years to come.

Such is the background that led up to my last hunt with Kiki, a hunt rich with sterling performances faithfully and lovingly done and with woodcock wile that tested us to the utmost.



There are those who say woodcock are not particularly brainy, that it is a simple matter, once they are located, to follow them up and get them. I wish I could have had such a one with Ray Potter and me on that last hunt. What a lesson that would have been to him. I can't believe that anybody who has hunted these birds to any extent or who has made any kind of a study of them, will say they are dumb. Such statements are based on ignorance of the birds' true worth. Here is one case where familiarity does not breed contempt—it breeds respect.

Very much unlike (?) the general run of hunters, especially owners of bird dogs, I had been bragging to Ray about the unusual number of birds, of course only casually mentioning the marvelous work Kiki was doing on them. Now Ray was somewhat of a skeptic on such matters, especially after having been up to Ryman's and finding the covers deserted.

The upshot of it all was that we arranged for a day afield. We usually had a day or two together every year, partly I believe, because Ray liked to shoot over Kiki. In my opinion, Ray is one of the greatest wing shots to be found. I know the year before, when James C. Clark, head of the Preparations Department at the Museum, came up for a shoot and Ray wanted me to use Kiki

to give the "Boss" a real day, Ray had had a consecutive run of 11 birds on 11 shells, pretty fair shooting in any cover, especially the kind we have here. For my part, as a shot, sometimes I'm almost hot, sometimes I'm only luke warm. Hunting with Ray seems to raise my shooting temperature so that I'm warmer than average. Maybe I ought to go with him more often!

Braggarts usually get their come-uppance. The flight had all gone and hunt as we would, we couldn't locate a bird for a long time. I had visions of a fine razzing if something didn't happen soon. The first hour went by before a bird was found and then it fell to Ray's lot to be off to one side in a small swampy spot when he flushed the bird.

At the shot, I looked up over my head just in time to see a bunch of feathers exploding and a plump brown form come hurtling down out of the feathers, almost straight at me. Kiki pointed the dead woodcock within 3 feet of my feet.

That was all that that section of the cover had to offer us, except once or twice Kiki made game and came to a temporary point, only to cast around again, telling us the bird had gone. We soon suspicioned that we were up against some old-timers who were wise enough not to lie for the dog, so we kept careful watch ahead of Kiki. Sure enough, we soon saw a ghost of a bird rise silently some 50 feet ahead of the pointer, fly low and duck down quickly out of sight.

We started off in pursuit, but when we covered the spot where we had marked the bird down, Mr. Woodcock was not there. We kept on searching, making wider circles, until we came to the edge of a clearing. I had just climbed over a wire strand, when Ray called "Mark."

Kiki had been making game behind him when the bird flushed off to one side, swinging around in front of him, offering a fine shot. But Ray didn't shoot, instead he did one of those things which only a real sportsman can do. He had had the first bird and this one was winging my way—so he called "mark" and left it for me.

As the bird darted by me and swung around in a straight line across the opening—a perfect target rare in woodcock shooting—I did not know what Ray had done. Later, when I found out, I thanked my lucky stars that I had made good with my little 20-gauge and dropped the whistler cleanly in the center of the clearing.

Ray's sporting gesture cost him dearly, for during the rest of that hunt not a bird flushed near him nor would they fly his way.



Once, when Kiki finally had one nailed close, I tried to call him to the shot but he claimed it was my bird and insisted I work the dog. Who could help having a grand time when out with a guy like that?

The next hour taught us to respect the ability of these woodcock. They were gun-shy, man-shy and dog-shy, about as bad as the grouse in our section. We beat most of our favorite cover and saw only two more birds. The first led us a pretty chase, flushing wild and finally flying off over the tops of the trees, going where we knew not. Nor did we ever find him unless, perchance, he went over the hill and back to the edge of the clearing where I had shot my bird. At least, when we returned, Kiki found one there for me.

Ray was behind me when Kiki first pointed. She broke as I called to him and trailed the running bird. Ray stayed at the clearing while I followed the pussy-footing bitch who stopped, went ahead a step or two, looked carefully around and crouchingly advanced.

There is a tenseness about such a moment that holds one breathless as he clutches his gun at ready, trying to watch the beauty of motion of his dog; search the ground and leaves for a telltale glimpse of the twinkling bead of the big dark eye of the furtive, camouflaged Timber-Doodle and also keep an eye ahead for a wild flush. It is a momentary drama amid hushed expectancy, exploded by a flurrying, whistling burst of buff that hurtles upward through leaves and branches, twisting and dodging in a bewildering erratic flight. Is it any wonder one misses such a target? Rather, it's a wonder one ever hits it.

As this bird flushed wild again, luck was with me and Kiki located my second kill. That ended the hunt in this cover and so we drove on to another favorite spot.

Here, again, the birds were on their toes and led us a merry chase. To start with, there were only two birds in the whole cover

and we traveled far and wide to find them. The entire eastern section was barren, not a feather could we find. So we turned to the western side where there was a small pond and some swampy spots. If birds were to be found any place, we figured they would be there.

Our judgment was proven wise almost the moment we entered the cover. Ray was off to my right as we went over a tumbled-down stone wall and headed for some thick briars. Off to my left Kiki was deep in a bed of



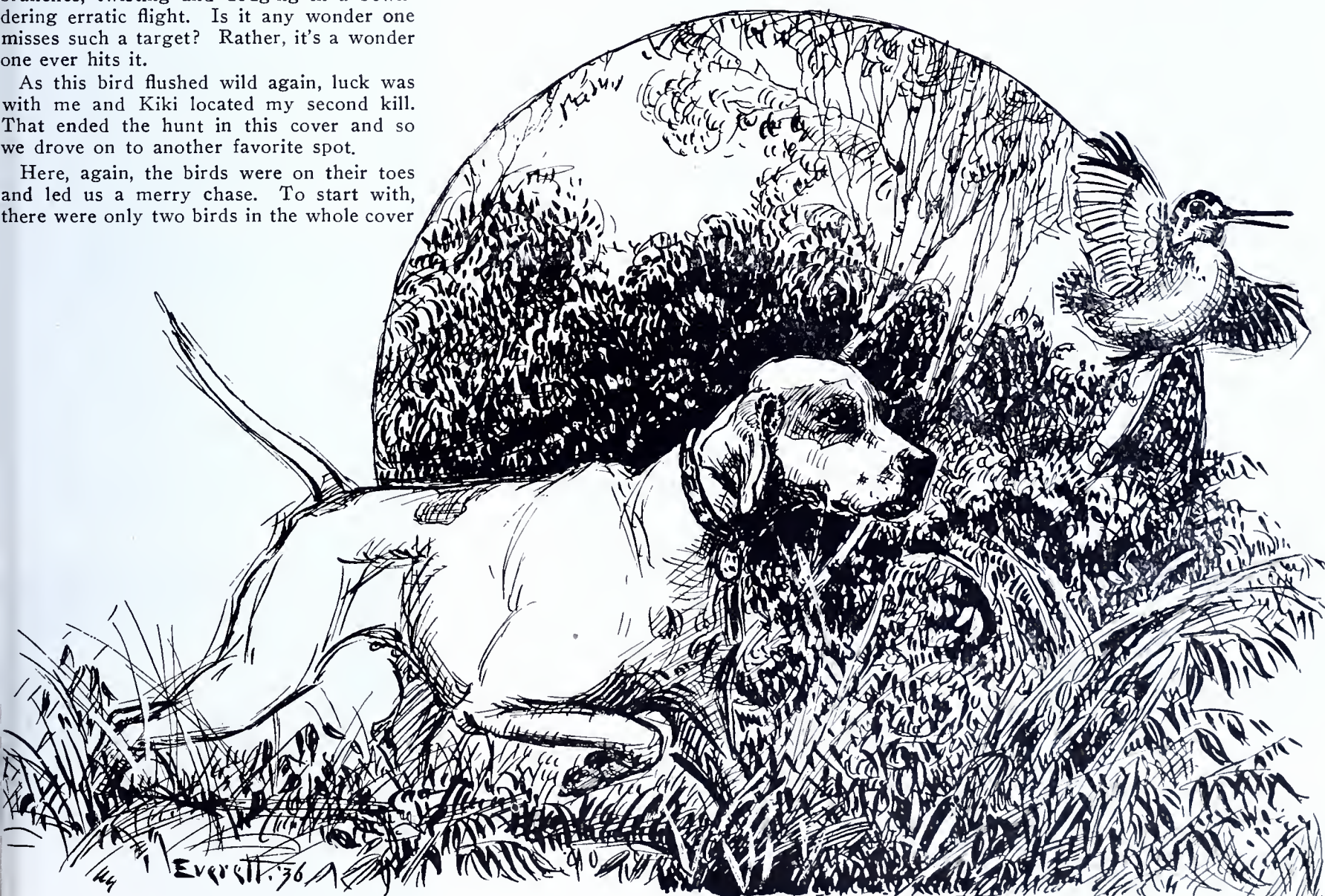
poison ivy. As I caught sight of her she suddenly swung round into one of those "double bend" points, trying her best to hold it and her balance at the same time.

As I called "Point" and took a step forward, out went the woodcock, straight off to my left. When my 20-gauge spoke, it dropped down plunk into the poison ivy. Now poison ivy and I are not friends but in this case it made no difference. I picked up the bird from under Kiki's nose, rather gingerly, I'll admit, and after straightening its feathers, put it carefully in my pocket.

I now had 3 birds on 3 shots—some kind of a record for me. I lay it to Ray's influence. But Ray had only had one shot and one bird, so I determined the next birds, if more there were to be, should be his. I personally have an aversion for limit kills or catches. I had never shot my limit in woodcocks and when fishing, had never kept a limit in fish. I believe that "limit" laws have one great fault—they tend to give the sportsman a mark to shoot at and they feel that if they can only get the limit, they have done something to be proud of. On the contrary, except when limits are extremely small, such as 2 partridges or pheasants, I believe taking the limit is something to be ashamed of. Not that 4 woodcock is too many when the flight is on. But when birds are scarce, I believe one should be content with less and leave something for another day or another sportsman.

So it was that I figured I had had a perfect day, for I was through and had not had a miss. Then Kiki again drew up on a tight sitting bird right in front of me. One instant it held, then flushed, going back over my head and dropping only a few yards behind me. I let it go and called to Ray but before he could reach me, Kiki had found the bird again and was holding one of those points so beautiful to see. You know—stretched out straight and stiff, one foot up, her jaws quivering her nose seeking even more scent and her eyes eagerly searching for sight of the hidden quarry. How I love to watch such work!

(Continued on page 28)







Like a beast of the jungle  
the cat stalks its prey.

# THE COMMON CAT

By CHAS. F. STAMBAUGH

**T**HE cat has absolutely no protection in Pennsylvania. Many individuals who are more or less interested in the house cat are somewhat perturbed that an animal so apparently harmless and companionable should be denied the smallest measure of protection.

The fact is, that practically all of our forty-eight states today refuse to recognize the cat as personal property; and in Pennsylvania as well as most other states, no action by law can be taken to recover the value of a cat that may have lost its life at the hands of some intentional destroyer. It is virtually "an animal without a country"—a legal outcast.

## ORIGIN

The present domesticated cat apparently originated in ancient Egypt, where its existence is evident in the very earliest records. It must have been much admired by the ancients, as elaborate mummy cases in which it was entombed have been found. However, there is nothing in the records to indicate that it was anything but an habitual killer of other forms of animal life—a carnivorous animal. In India we find it mentioned in manuscripts dated at least 2,000 years Before Christ. From Egypt the cat was brought to Europe, whence America received its present stock.

For approximately 4,000 years, then, mankind has endeavored to domesticate and civilize the cat; and how have we succeeded? Well, as educators of this feline animal, we humans are hopeless failures!

## INSTINCT

Not long ago the writer watched an abnormally large pet cat sneak noiselessly upon an adult robin, seize the bird in its mouth, and proudly carry the limp form to the door of its mistress. That this cat was well fed was clearly indicated by its excellent physical appearance. Many similar cases of generously fed cats killing birds and rabbits have been reported to the Game Commission.

Practical experience and observation have proven that the old theory that a well fed cat will not destroy wildlife must be discarded. The ancient, irresistible instinct to kill is there, even though the need for food is lacking, and in the thousands of years the cat has associated with civilization, this urge has not been dispelled. He is a prowling, predatory animal, of the same family (Felidae) as the lion, tiger,

leopard, puma and other nocturnal feeding relatives. Regardless of how well fed he may be, this inherent desire to kill is ever present, and the cat will constantly seek an opportunity to satisfy it.

Maybe we should not blame the cat itself too severely; one cannot be responsible for his heritage. But we can face the facts and try to control the situation accordingly.

## CATS VS. BIRDS

Early this summer a friend of ours had been watching a pair of song sparrows nest in a hedge fence at her home. She saw the four mottled eggs, then later observed the mother bird feeding the four young in the nest. One day she came, practically in tears, and reported that a neighborhood cat had completely torn down the nest and killed all four young birds.

Now, the diet of the song sparrow in the summertime consists of more than fifty percent insects, including various beetles, ants, caterpillars and grasshoppers. The balance of the food is made up of the seeds of noxious weeds.

Any one of these four young song sparrows killed by the cat would have been much more valuable economically to mankind than the cat. Insects offer an increasing menace to human existence, and scientists admit we are fighting a losing battle against their growing hordes. It behooves us, therefore, to give every possible encouragement to birds and other creatures that feed on insects, for without birds, insects would make human life impossible. One of the best ways to encourage birds is to control the cat.

## TOO MUCH FREEDOM

It is increasingly apparent that if we are to encourage wild creatures of more aesthetic and economic value, something must be done in the not too distant future to definitely prevent the house cat from continuing to enjoy the freedom of the entire neighborhood in which he lives. He may have some value in destroying rodents, but if given absolute freedom, this value is far offset by the harm done in destroying birdlife. No one wants to see any species of animal life exterminated, and such drastic action is certainly not advocated in the case of the cat. But, in all fairness, it does seem that something should be done to reduce the excessive number of felines now in existence. Many of them are home-

less, thrown out of automobiles and farmhouses to shift for themselves.

## THE CAT ON THE FARM

Even on the farm, the value of the cat in destroying rats and mice is questionable, when one considers the countless hundreds of insects that might have been killed, had not the cat taken its heavy toll of insectivorous birds. The farmer knows only too well the ceaseless battle he must wage against insects, and the birds on his farm are helping every day in this fight by constantly feeding upon these pests. It behooves him, therefore, to give his bird friends every encouragement by either abolishing or controlling their arch-enemy, the cat. He cannot have cats and birds; one class must be eliminated if the other is to progress. Surely he cannot afford to eliminate the birds, so he must do something about the cats.

## SELECTION

Is it not possible to select, by a "weeding out" process, the more desirable and attractive breeds of cats, from the standpoint of beauty and charm? And then, with equal vigor, discard in some humane manner the worthless, unattractive, common ones remaining? If this were done, those selected could be owned with sufficient esteem to keep them under proper control, so that the menace to wildlife would be negligible.

The cat will always be a killer; he is no more civilized nor better mannered now than he was for the ancient Egyptians. And if you want more birds—and less insects—you must have less cats. But if, after all this, you must keep a cat, please keep him on your own grounds, under constant control.



Even the well-cared-for house pet will occasionally resort to the wild.





# LEST WE FORGET







THE LOYALSOCK GAME FARM,  
PROFITABLE SPOT FOR THE

PENNSYLVANIA BUCKS ARE  
CONSIDERED AMONG THE  
FINEST DEER TROPHIES

YOUR GAME  
IN PICTURES

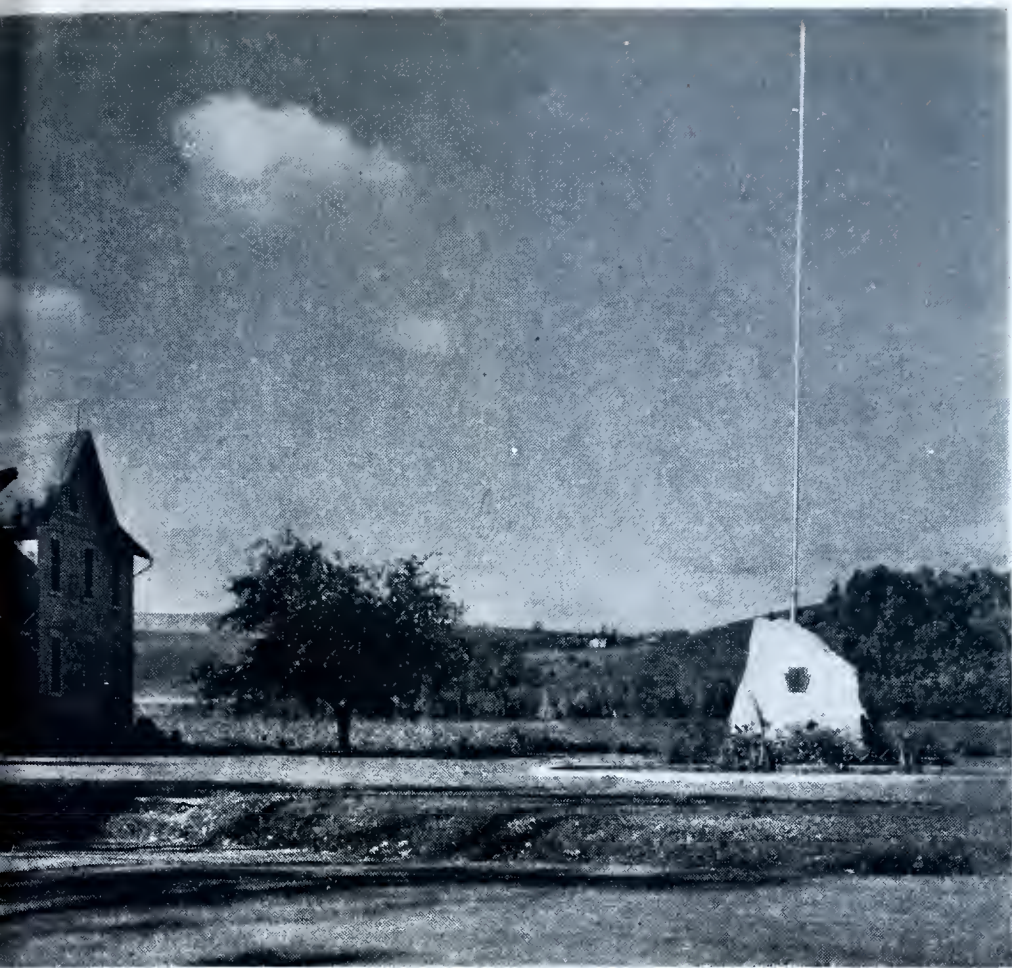


IN DAYS GONE BY WHEN COMMISSION TRAPPERS LED  
TRAPPED BEARS THROUGH UNTRACKED WOODS TO THE  
AWAITING CONVEYANCE.  
C. E. Logue Photo



THE JORDAN GAME FARM  
HARLANSBURG HAD A SIGN





OMING CO., A BEAUTIFUL AND  
EARING OF GAME BIRDS

## ME NEWS TURES



LAWRENCE COUNTY NEAR  
WIDID SEASON THIS YEAR



AN EXCELLENT FLASHLIGHT OF THE WARY  
OPOSSUM—BY CLIFTON C. ALSTON



WILD TURKEYS AT A WINTER FEEDER. LAST WINTER'S  
FEEDING SHOULD BEAR FRUIT THIS FALL TO TEST THE  
HUNTER'S SKILL.





FAWN DEER  
FOSTER  
MOTHERED  
BY REFUGE  
KEEPER'S  
DOG

SECRETS

MOTHER  
MALLARD  
AND HER  
YOUNG



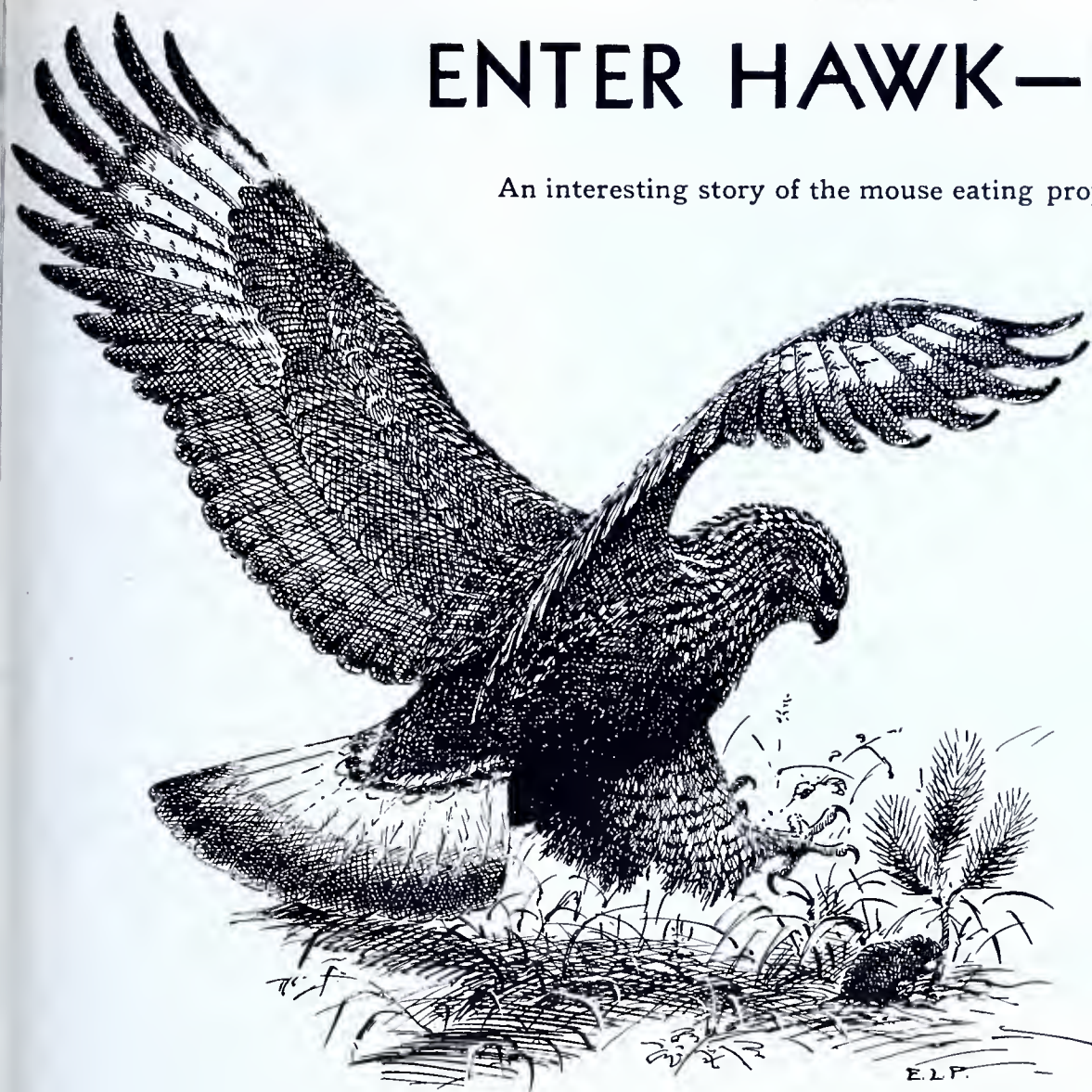


# ENTER HAWK—EXIT MOUSE

An interesting story of the mouse eating propensities of the Rough-legged Hawk

By EARLE L. POOLE

Note: Mr. Poole, curator of the Reading Public Museum, has made a life study of the habits of birds and mammals, and has beautifully and characteristically portrayed them in his fine etchings and line drawings. He has traveled in many parts of the world and his studies of mammalogy and ornithology have been widely recognized. It is with a great deal of pleasure that we welcome him as a contributor to our columns.



The Rough-leg, arch-enemy of meadow mice.

Illustrations by the author.

IN 1928 the city of Reading acquired a tract of about 3500 acres along the course of the Maiden Creek in Berks County, as a site for an impounding dam. In this area, during the next few years, about 2,500,000 seedling Red and Scotch Pines were planted, so that now a promising young forest surrounds the recently completed lake which furnishes Reading with its water supply.

Much of this land was formerly devoted to agricultural purposes, perhaps the greater area having been given over to the raising of grain or to grazing. The former meadows were naturally covered with a luxurious growth of grass and supported the usual large population of meadow mice.

Today, between the infant pines, the former meadows have developed into weedy tangles that form ideal retreats for all sorts of small creatures of the neighborhood, and in addition to the mice, support a large population of rabbits, ringneck pheasants, skunks, groundhogs, and weasels. These in turn have attracted a following, particularly during the colder half of the year, of the birds of prey that find the broad landscape, now nearly denuded of older trees, a productive hunting ground.

The fact that hundreds of pheasants and probably thousands of rabbits have been captured in this territory and distributed to sportsmen throughout the country, is an interesting illustration of what may happen to game in a restricted region in which hunting is not permitted, and nature is allowed to maintain its own balance.

From October until late April, anyone standing in some favorable spot on this watershed could certainly see with the aid of binoculars here and there on the few taller trees that remain in the area, or coursing over the young plantation at least half a dozen of the various species of hawks that have found the watershed a haven of refuge and bountiful source of their favorite food supply—the common meadow mouse—*Microtus pennsylvanicus*.

At night the owls take over the self-imposed task of the hawks, and sweep over the meadows throughout the hours of darkness. Often during the day I have flushed flocks, up to sixteen in number, of the increasingly scarce Short-eared Owls, as they rested in some patch of weeds, and still oftener have I come upon the pellets cast up by these nocturnal hunters. Being interested in mammalogy, and having learned by experience that these winged nimrods have a way of occasionally turning up rare and little known species of small mammals, I have always made a practice of collecting the pellets regurgitated by these owls, and by the Barn Owls which hunt over the same meadows.

In the course of years I should judge that I have examined well into the thousands of these pellets, and have always found the skulls and fur of *Microtus* to form at least 95% of their bulk. As to the hawks, an interesting opportunity to estimate their function in an area of this sort came in the winter of 1934-35, when one of the local

deputies who happened to be trapping pheasants on the area for distribution, took it upon himself to shoot as many hawks as possible. These were later turned over to, or acquired by the Reading Museum, and the stomach contents examined.

The winter in question was remarkable for the comparative abundance of Rough-legged hawks, which had previously become quite rare in this part of the country. As these large hawks come from the far north, where they have few opportunities to come in contact with humans, they are usually unsuspicious, and form tempting targets, so that a number of them found their way into the museum's collection before the matter (Continued on page 25)



An appalling number of the infant trees had been girdled by meadow mice.





Officers and delegates, with prominent state officials at 29th convention of United Sportsmen of Pennsylvania, held at Harrison Park, Pocono Mountains, recently.

## WITH THE CLUBS

The regular fall get-together of the Carbon County Sportsmen's Association will be held Friday, October 16. The association will be the guests of the Tri-Valley Out Door Club, Weatherly. Seth Dodson, president of the Tri-Valley Club, together with Wm. H. Barto, secretary of the county association are making extensive plans for a unique meeting, both from the standpoint of education and entertainment. Seth Gordon will be the principal speaker on this occasion.

Members of the Montgomery County Fish, Game and Forestry Association and the Legislative committee of the Federation of Sportsmen of Montgomery County discussed recently a proposed amendment of the old Trespass Law of 1905.

The proposed amendment would do away with the posting of lands but all gunners would be forced to ask permission to gun on all premises. Penalty for failure to obtain permission would mean a \$10 fine and costs. Half of the fine would go to the informant and the remainder to the school district in which the lands were situated.

The Kishacoquillas Valley Sportsmen's Association, Mifflin County, is planning a unique membership campaign. The association will furnish the County Treasurer, Lewistown, Pa., with a stamped envelope in which Resident Hunter's Licenses will be forwarded to applicants. In the envelope will be a brochure and application blank asking hunters to become affiliated with the club.

The York County Gun Club will hold its second annual sportsmen's Field Day and trap shooting tournament on October 12. The trap tournament will include individual, class, and team competition.

Other events will include archery, bait casting, pistol and rifle shooting, skeet, block shooting, etc.

Close to 1,000 sportsmen turned out for the field day staged at Orwin Park recently by the Western Schuylkill Affiliated Sportsmen's Clubs.

The gathering was held for the purpose of raising funds to make possible a stream improvement project on Clark's Creek, west of Tower City.

There was also a program of entertainment including trap shooting and fly and bait casting.

Speakers included Seth Gordon, Executive Secretary of the Game Commission, Congressman James Gildea of Coaldale, Joseph Dando, of Llewellyn, Representative Edgar Schroepe of Hegins, Field Supervisor Jay C. Gilford of Tamaqua, Game Warden John Lohmann, of Schuylkill Haven and Fish Warden Anthony Lech, of Cressona.

The Machine Age took a back seat in the State of Alabama recently when a hen wild turkey with a brood of chicks flew against the windshield of a truck, shattered the glass, and severed an artery in the driver's arm. Then the turkey hen, apparently unhurt, strutted off with her peeps.

# HERE AND

## 4,000 AT WASHINGTON SPORTSMEN'S PICNIC

Fully 4,000 sportsmen and members of their families joined in the first annual picnic and field day of the Washington County Sportsmen's and Conservation League recently.

There were speeches by leading game officials and sportsmen, and an extensive program of competitive sports for junior and senior members.

The awarding of prizes for the 1936 vermin drive was the main feature. The Midway Sportsmen's Association, with a club total of 109, 175 points, won the Colin McF. Reed trophy. Individual high honors and a \$25.00 cash award went to Jules Dubois, of Midway. Second honor was given to Prosper Pierrard, of McDonald, and third honor to Theodore Jones, of Midway.

The following sportsmen were given honorable mention: Alfred Doyle, Marianna; Thomas A. Smith, Raymond Kirkpatrick, Robert Lee, M. Gordon, A. C. Stephens, Robert S. Young, Clyde Harris, R. McBee and Carl Griffith, all of Langeloth.

Speakers on the program included: A. Lloyd Russell, Dr. G. W. Rinck, Colon McF. Reed, Chairman of the Southwestern Division of the Pennsylvania Federation of Sportsmen's Clubs; Rollin Heffelfinger, Division Game Supervisor; John Mock, Outdoor Editor of the Pittsburgh Press; and Game Protectors Carl Stainbrook and R. H. McKissick.

## BEDFORD CROW SHOOTERS WIN AGAIN

Bedford County's crow shooters led by Captain Dave Kregar recently defeated a team from Fulton County in a crow shooting contest.

It marked the second time this year Bedford countians emerged victorious over their fellow-sharshooters in felling crows. Frank Kirkchner led the Fulton County team.

The event took place in Fulton County and the two teams reported their kill at the Fulton County Fair grounds, when the winner was named. A rifle and pistol shoot provided enjoyment for the sportsmen during the afternoon.

In the evening a delicious banquet was served the sportsmen at the Fulton House in McConnellsburg.

Among the speakers were Wm. G. Fluke, of Saxton, member of the State Game Commission; "Uncle" Dan C. Schnable, of Johnstown, Fish Commissioner; Albert Denmeade, of Washington, D. C., Chief of Protection, Bureau of Fisheries; William J. Davis, of Huntingdon, Division Game Supervisor; George Wirt, Chief Forester, of Harrisburg, and Jack Stowell, of Washington, D. C.

B. C. Lamberson, president of the Fulton County chapter, Izaak Walton League of America, was the master of ceremonies.



# HERE WITH THE SPORTSMEN

## THE FULL GAME BAG AND YOU By DR. H. E. HENRY

The full game bag may or may not be the insignia or badge of a Sportsman. For example, the hunter or fisherman who lugs home full limits of game or fish and then goes down to the country store and boasts of his kill, but doesn't say under what conditions or how he got it, may be one of two things—a selfish meat hunter or a "story" teller. He is either the "whole hog or none" type or the kind of a fellow who sits on the liar's bench. Nevertheless, his associates term him "a good hunter" and "a real shot."

What does he do with his full game bag? He is all pepped up, goes back, and chances are he brings home another and still another full bag on different days. The answer is this: He serves little game on the table and puts the remaining meat IN CANS or jars for future food, and long after the thirty day limit he is still eating game.

What Should the Hunter Do With the Full Game Bag? The true sportsman returns home with a bird or two, and occasionally a full bag. If it's a full bag, what does he do? He gives some to the sick, the aged, and the crippled. He does not forget the old hunter who can no longer go afield and shares a portion with him, also. He realizes how much he would enjoy a meal of squirrel or trout were he unable or too old to hit the trail as in days of yore.

Fellow Hunters and Fisherman, be TRUE SPORTS; obey the game and fish laws and be ever mindful of the fact that "A Sportsman always obeys the rules of the game he is playing."

If YOU are so fortunate as to get a full game bag, don't forget the needy; also give some game to that old comrade who no longer can hunt or fish. You will experience more of a thrill in giving a part of your bag to such people, and in receiving their heartfelt thanks, than you did in killing it.



Maj. Nicholas Biddle, left, and Charles J. Belden holding pronghorn antelope which the latter transported by airplane from Pitchfork, Wyoming to The Philadelphia Zoo.

The 37th annual Grand American trap shooting tournament opened on Monday, August 24, with a bang that again brought laurels to Pennsylvania marksmen. Walter S. Beaver, of Berwyn, 1933 Grand Handicap Champion, carried off the lion's share of the opening day's events by winning in class A 197x200. "Steve" Crothers, Chestnut Hill, Philadelphia, Pennsylvania's State champion from the 16-yard line, was runner-up, breaking 195x200.

Captain J. B. Grier, Rockland, Delaware, a member of the 1934 Olympic team, who turned pro less than a year ago, cracked 199x200, topping the field of 400 shooters. Captain Grier has been shooting clays only since 1931.

Other Pennsylvanians who participated in the opening day's classics, were—Henry Hostetter, 171; J. W. Eshleman, Jr., Lancaster, 177; H. K. Sarver, Windsor, 177; T. J. Webb, Towanda, 174; B. Northrop, 164; C. H. Todd, Conshocken, 183; J. Morrell Hawkins, pro., 192; Elmer Miller, Millersburg, 192; A. Mulhaupt, Bradford, 194.

W. E. Hughes, prominent in hunting and fishing circles in Oil City, was elected president of the Northwestern Division (F) of the Pennsylvania Federated Sportsmen's Clubs at its annual meeting held recently at the Weaver Hotel at Tionesta.

Frank G. Norris, of Butler, was named vice president for the third time; Howard Alexander, of Warren, was named secretary, and Eugene Galloway, Grove City, was elected treasurer.

Chester County hunters and fishermen are laying plans for one of the biggest gatherings of sportsmen ever held in the State. It will be a two-day Jubilee, and will take place on October 16 and 17 on the 300-acre farm of the Philadelphia Y. M. C. A., South of Downingtown.

The real purpose is to do something for the farmers who make hunting possible in Chester County. The bulk of the revenue derived from the rally will be used to purchase grain, direct from the farmer, for winter feeding, to purchase game and fish, to protect the owners and lessees of lands in Chester County from irresponsible hunters and fishermen and to teach sportsmen what courtesy in the woods and fields really means.

A heavy, but very fleet, 7 point buck deer invaded Mount Carmel recently, leaving traffic consternation in the wake of his jaunt, and butting his head through a plate glass show window.

Scores of men and boys tried to catch the deer, but failed. A truck driver chased the animal in his truck, but although he held the throttle wide open, the vehicle was no match for the fleet-footed creature.

Jack Quigg, of Sewickley, won the vermin contest of the North Boroughs Sportsmen's Association, and immediately turned the cash prize back to the club to be used for purchasing feed for game.



Unique weathervane at camp of John Beck, Lycoming County.





## ODE TO A TURKEY

By J. LESLIE DAVIS

When de sta's am sinkin' westwa'd  
An' de eas' is pinkin' up,  
You sta'ts out feelin' lazy  
Till you've drained yo' coffee cup.  
You go trudgin' th'ough de woodland,  
Stumblin' over limbs and logs,  
Git intangled in a barb' wire,  
Skin yo' shins an' rip yo' togs;  
But sich incidents is trifles  
Cause a feller's spirit's high  
While he's thinkin' of de trophy  
Dat he'll tote home bye 'n bye.

So he gits his se'f secreted  
In a blin' dats close an' tight,  
Tho' to make it extra sight-proof  
Keeps on chinkin' cracks o' light,  
Now let dat scound'el show he se'f  
Fo' I's done loaded up  
'n I'll plug dat head so full o' lead  
He'd float wid tail straight up.  
De hours drag on, I dozes off,  
When sudden' I surmise—  
Bless God! in front o' dat peep hole—  
I can't believe my eyes!

'Less my eyes deceives my eyesight  
Dey must be six or eight  
Fine turkey hens a pickin' feed,—  
A gobbler stan'in' straight.  
Dey scratch dis way, dey scratch dat way,  
But al'ys keeps one eye  
On dat peep hole in front o' me,  
Den looks up at de sky.  
Oh, Mister gobbler, taint no use,  
—Excuse me if I brag,  
Tho' you's a "turkey in de straw,"  
I 'vites you in my bag.

I pints my gun, I draws a bead,  
Dis time I's got de goods;  
A skeeter bites, I bats my eye,—  
Dat turkey's lef' de woods!  
Say, Mister turkey, taint no use  
You fly so fas' like dat,  
I only wants jus' ha'f a chance  
To raise to you my hat.  
Of all de birds dat roams de woods  
You's ace ca'd in de deck;  
I ba's my head, I s'lutes you, suh  
You sho' has my respec'.  
He lef' no address wha he gwine,  
An' I aint keer'f he won't.  
I might git sta'ted braggin' 'gin,  
'n it's better dat I don't.

## DUCK HUNTERS ALLOWED 30-DAY OPEN SEASON

President Approves New Regulations With Drastic Restrictions;  
States Are Divided into Three Zones for Hunting

**D**UCK hunters will have 30 days of hunting this fall under restrictions equally as rigid and drastic as those in force last season. Last year also the hunters were allowed only 30 days.

The New Migratory Bird Treaty Act regulations announced on August 14 by the U. S. Department of Agriculture were recommended by the Biological Survey, adopted by Secretary Wallace, and approved in a proclamation by President Roosevelt.

The new regulations continue stringent restrictions on the hunting of waterfowl in order to cut down the annual kill. The restrictions put into force last year were intended to bring about a reduction in the kill and they accomplished that purpose.

This year there will be three zones — northern, intermediate and southern. Last year there were two, the northern and southern.

In the northern zone the season opens October 10 and closes November 8, in the intermediate zone the season is November 1 to 30, and in the southern zone, November 26 to December 25. Pennsylvania's sea-

son is November 1 to 30.

Three important species of waterfowl, the Atlantic brant and redhead and canvasback ducks have been placed on the list of fully protected species this season. These three have not shown the recovery noted in other species. Other protected species include Wood Ducks, Reddy Ducks, Buffleheads, Swans and Snow Geese.

Last year's regulations prohibiting baiting and the use of live decoys and sink boxes or batteries have been strengthened and continued. No aircraft, power boat or floating device of any kind may be used to concentrate, drive, rally, or stir up waterfowl.

Waterfowl and coot may be hunted in season from 7 a. m. to 4 p. m. standard time. All other migratory birds including rails, snipe, woodcock, etc., may be hunted between 7 a. m. and sunset.

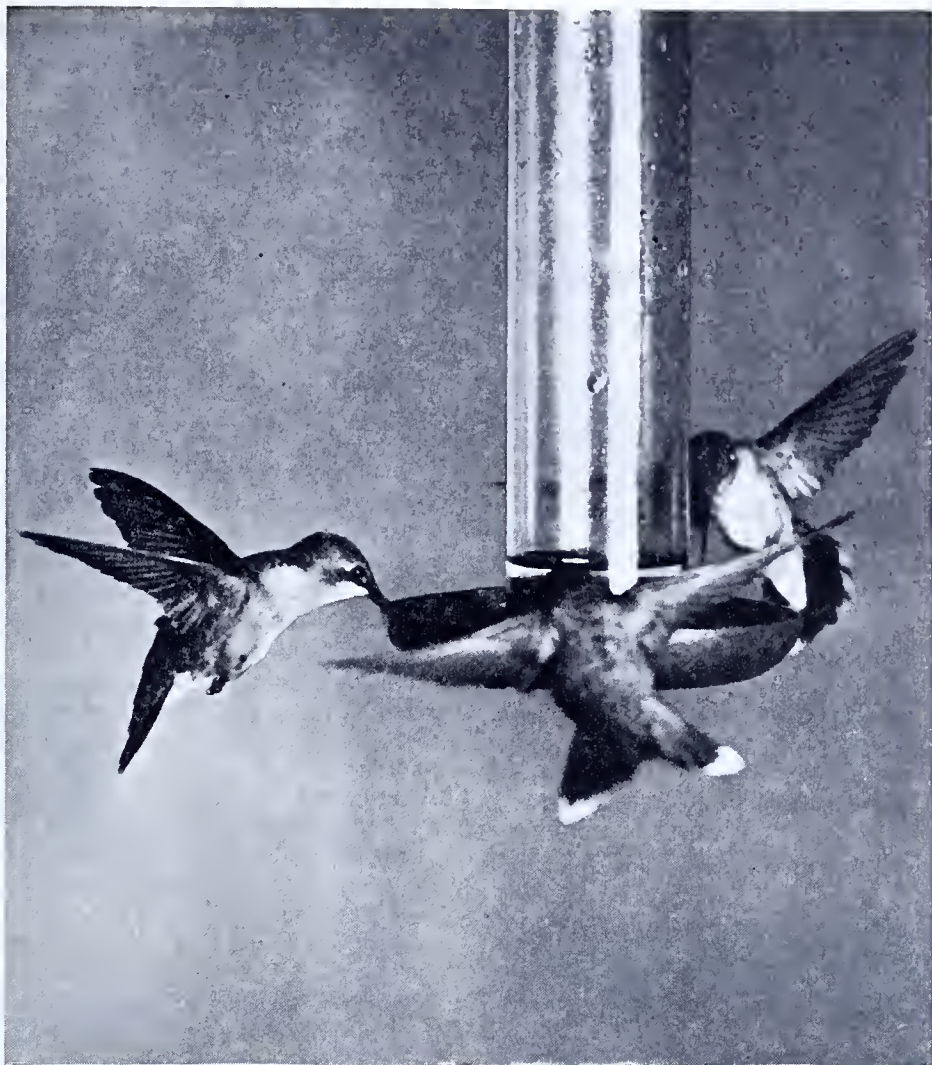
The 3-shell limit on repeating shotguns in effect last year is continued this season. Hunters may use shotguns not larger than No. 10 gauge.

The 100-foot regulation for the location of blinds has been eliminated.



Fine specimen of Black Bear killed in Pennsylvania last season by Governor Earle. Weighs over 400 lbs. The animal was mounted in this pose to fill a special place in the Governor's trophy room.





Hummingbirds drinking sugar water from glass vial. During migration these tiny birds fly all the way across the Gulf of Mexico (500 miles) without a stop.

*Courtesy Science News Letter*

## RANDOM NOTES

(Continued from page 9)

The boys at CCC Camp S-102, on Game Lands No. 57 near Mehoopany, Wyoming County, have made friends with a wild bear in the vicinity of a project on which they are working. The bear first made its appearance a couple of months ago, approaching the group very timidly as they were eating lunch. They threw some food to it and finally succeeded in coaxing it to a road. It now shows up practically every day at lunch time, and will stand on its hind legs to reach for a sandwich.

The current issue of *America Wildlife*, official organ of the American Wildlife Institute, contains a very interesting article on Pennsylvania's Experimental Refuge Program for small game by Seth Gordon.

If any sportsmen's association's name is not on the Commission's mailing list, send it in to the EDITOR.

In Germany special provisions are provided for over-night stops for hikers in what they term a shoe-leather route to nature study. Under Federal regulations in the United States similar arrangements are being made for establishing such trails for nature students.

The Alabama Department of Conservation recently set aside \$15,000 for a Quail Farm project. It will be put into operation soon.

Wisconsin acted wisely in prohibiting the stocking of wild boar. In California, near Santa Barbara, the animals have multiplied so rapidly that they are a serious menace and no person is safe unarmed in the range of the animals and their presence in northern Wisconsin woods would be a detriment to its recreational interests.—*Antigo Journal*.

The State of California has several million acres of land now controlled by the schools, and it is planned to reimburse the school fund, free all lands, and transfer them to the Department of Game Conservation, whereupon they will be dedicated to wildlife and recreational purposes.

State and county game officials find it pays to examine closely pelts turned in for bounty. Unscrupulous bounty-seekers sometimes do a good job of disguising skins on which no bounty is offered.

In northern Montana, for example, a large number of coyote pup pelts on which bounties were paid last spring, turned out to be

ground squirrel skins. They had been colored with a mixture of grease and lamp black to resemble skins of young coyotes. Pelts of fully grown ground squirrels and young coyotes are about the same size.

More rabbits are used for the fur trade than any other animal. Besides being used to make felt hats, hundreds of thousands are made into fur coats, and sold under the names of seal-musquash, two-L seal, Lemeuse seal, Ermine, Baltic fox and Polar seal.

In Wisconsin recently a colored lad was assigned to chase a Fish Hawk from a private fishing lake. The boy shot at the hawk, which attacked him. It was necessary to amputate the bird's leg to get its talons out of the boy's arm.

A California State Game official believes that Marin County, that state, has all the crows in the country. He should see some of the big crow roosts in Pennsylvania.

This year the seasons and bag limits will be designated on the back of the resident hunter's license certificate. A return stub is also attached on which every hunter is requested to fill out the amount of game killed at the close of the season, and mail the card to the Game Commission, Harrisburg.

It is said that a thrush can see a worm in the grass 100 yards away, a sparrow a crumb 50 yards distant, that a swallow flying 40 miles an hour can see an insect 100 yards ahead, and that a hawk poised 300 feet in the air can detect a mouse in heavy growth. Eagles and Vultures also possess super-telescopic sight.

Game Refuge Keeper William G. Matthews of Rector, Westmoreland County, is having all sorts of trouble trying to catch an escaped monkey. He saw the little fellow a number of times in the trees along the refuge line, and hopes to catch it in a live trap very soon.

James G. Pugh, of Coatesville, broke 46 out of 50 clay targets on his 85th birthday in July. Sportsmen celebrated his birthday at the annual Pugh day event at the Lodge of the Center County Rod & Gun Club.

## NEW LITERATURE

**THE ARTIST'S GAME BAG**, by Lynn Bogue Hunt. All pictures and no reading. A book every gunner will enjoy. All popular game species and fur bearing animals are included; also predators. An education in itself. Published by Derrydale Press.

**NATURE LORE**, a splendid little book for older boys and girls interested in nature study. Prepared by Dr. H. P. Von W. Kjerschow Agersborg, Biologist, U. S. National Park Service, Washington, D. C.

**THE AMERICAN WOODCOCK**, by O. S. Pettigill, Jr. The most complete study ever made of one of our most popular and least understood game birds. Published by Boston Society of Natural History.



# THE ROLE OF CYCLES IN CONSERVATION

Present Knowledge of This Subject Must Be Expanded Through Research

By LEONARD WILLIAM WING

Reprinted courtesy American Wildlife

**A** CHANGING concept of conservation can be discerned in the thought of today. In the good old days, wildlife conservation was unknown. The game warden philosophy that fishing and hunting were rights and the seasons were to be regulated in order to spread the dwindling game around was strongly entrenched. But today creative conservation means a wise and well-balanced handling of natural areas and resources for game, timber, esthetics and recreation that the supply shall regenerate as used.

Conservation research is new, so new that it has not yet built up the honor and prestige accruing to conventional research. It is not bound by narrow limits of the orthodox; it rests on a broad foundation of predilection, free, untrameled and unhindered. Let us hope that it shall never be dominated by band-wagonism.

Wildlife research has moved so rapidly that the public is already years behind; administration is behind; even other wildlife scientists lag in their familiarity with their fellow workers' results. This is another prime reason, another leading argument for a central wildlife research organization and unified publication of results.

Cycles and the role of cycles is a new avenue of research on the problems of wildlife. But twenty-five years ago, the great Ernest Thompson Seton presented the first definite evidence of the cycle principle. We can call him the father of the cycle concept. He was followed by Elton, Leopold, Green, King and others who have been instrumental in building up a cycle consciousness in conservation thought.

The whole scheme of wildlife policy and wildlife planning is tied up with the cycles. Wildlife planning is looking ahead, but the men, the administrators who fail to realize and consider the cycles, can't fairly be called planners!

Many hypotheses and theories have regularly succeeded each other in explaining the cycles. Almost universally conservation officials have no knowledge of biology. The workings of most administrative minds is that you "can't treat sick birds." But the cycle problem is too real. It cannot be thrown overboard and forgotten. Conservation is no ostrich to thus hide its head in the sands of indifference.

To the everlasting credit of the gentlemen I have just named, the concept of cycles has become firmly entrenched in conservation research. It is a real principle of biology and the proper locus of scientific investigation. It is the function of conservationists to further the exploration of cycles. To do otherwise would lay them open to grave criticism on the score of improper un-

derstanding of the conservation forces. The cycle challenges science to unravel its mysteries and it challenges administration to consider its tidal wave of depletion.

The game population drop in America of the latest grouse, rabbit and duck decline may be conservatively guessed at 500,000,000. What effect should this have on conservation policy?

In my own state of Wisconsin, the loss of game in the downward phases of the cycles is surely 35,000,000 individuals. At a dollar apiece (and one dollar is cheap for Wisconsin game), Wisconsin's natural resource ledger has lost \$35,000,000. What effect should this have on conservation economics?

This raises the further question of finance.



Ruffed Grouse

With a national inventory loss of one-half billion pieces per cycle, with a Wisconsin inventory loss of thirty-five million, can conservation afford to niggardly deal out pennies for cycle research? The cycle rears its head over a broad range of the wildlife field. It builds up our game resource and then mows the density down. It throws our whole conservation mechanism out of equilibrium and we must suffer the consequences for it.

Efforts to discover the mechanism of the cycle are getting somewhere now. It has already been shown that the fluctuations we perceive as a phenomenon of nature are a blend of several cycles of varying length and amplitude. In one species may appear several definitely recognizable component cycles. In another we may find some identical cycles plus still other components.

Game men, sportsmen and others have been talking of 6-year, 10-year, 11-year, and other cycles. The primary cycle appears now to be about 23 years and other cycles

multiples and sub-multiples of the primary cycle.

Evidence is pouring in that the periodicity and phase may shift with geography. For example, it appears that the grouse cycle of southern Wisconsin and southern Michigan has a periodicity one-half that of farther north. It appears that the quail cycle will run at opposite phase in the midwest than along the Atlantic seaboard and the South.

The cycle may also be less severe in some parts of the range. On some ecological habitats the cycle influence may be particularly potent. There may be ameliorating influences in the environment which temporarily stay the full cycle power-drive. There may possibly be inherent features in the stock that tend to militate for or against the species. And again, it may be due to the presence or absence of components of the cycle.

We are directing efforts toward continuing to break the cycle into its constituent parts, toward an understanding of its geographic implications and the relation to cyclic features of the environment. The complexities of the cycle phenomena seriously question the probability of a panacea for all the ills of population. We must patiently unravel the skein to find the simple understandable elements at the bottom of the snarl. Conservationists, game men, sportsmen must be patient. They should help us but must not expect us to go through the devious alleys of the population maze overnight.

The supposition that wildlife cycles are dominated by the sun is no reason to ignore cycles. We should be inspired, we should be stimulated to greater efforts by this relationship. There is some reason why wildlife reflects the solar activities. Here we have a definite starting point and it becomes necessary to further explore and extend this line of inquiry.

Undoubtedly laymen and administrators will still ask us, "What are you doing about stopping cyclic losses?" Our only reply will be, "We can do nothing as yet. Before any practical remedies can be devised, before any practical remedies can be applied, we must know **what is going on**. Then and only then will we be in position to work out methods to combat these disastrous cycles."

Our attempts to break down cycles are an entering wedge in opening the door of darkness. It is possible and evidence leads us to believe it is probable, that these component cycles are the cumulative effects from several causes. Each differing cause may affect populations in its own way, at its own rate and in its own time.

The Weather Bureau spends millions of dollars to predict weather for two or three

(Continued on page 23)



## A NEW WILD TURKEY PROGRAM

(Continued from page 5)

Three projects of this sort were carried out with various degrees of success and failure. In two instances the wild gobblers were attracted readily, and all the hens not previously mated were fertilized and hatched and reared normal broods. Other birds within the area which had previously mated with the farm reared gobblers also brought forth normal flocks. However, there was a noticeable difference between the activity of these youngsters and those fathered by the wild Toms. The latter were much wilder and learned to care for themselves much sooner.

In the third instance there was a little difficulty in attracting a wild gobbler to the area, but eventually, by devious methods employed by the Keeper in charge, one came to the enclosure and mated with the penned birds.

Unfortunately again, in two cases dogs broke through the wire, which had been raised temporarily to permit the hen and poults to range more widely, and killed over fifty percent of both adult and young. Notwithstanding this catastrophe, however, the remaining birds perfectly acclimated themselves, and should provide splendid shooting for future years.

A conference of Board and Staff officials was held at the Wild Turkey Farm on Sunday, August 9, to determine the feasibility of continuing this project. I was particularly eager to have the matter discussed. I felt it to be of extreme importance and hoped it would be endorsed more widely. My wishes came true, for when our last year's activities were expounded to those present. I was both amazed and gratified to learn that, without exception, all were in favor of a continuance of the program on a much larger scale.

This extended program was discussed at great length and the results were very encouraging, so much so in fact that I venture to say it will be crowned with the greatest success.

Those Field Officers attending the meeting who are likely to be affected under the enlarged project were Division Supervisors Frank E. Myers and William J. Davis; Game Protector S. H. Price, Huntingdon County; Refuge Keeper John W. Fenton, Perry County; Refuge Keeper Ross Metz, Huntingdon County; Refuge Keeper R. E. Kauffman, Mifflin County; Refuge Keeper Orrie Smith, Fulton County; Refuge Keeper D. H. Franklin, Franklin County, Deputy Game Protector H. E. Metzger, Bedford County, and Refuge Keeper Elmer Alexander, Mifflin County.

Administrative officials attending the gathering included Seth Gordon, Executive Secretary, and his assistant Judd Turner; Charles W. Wessell, in Charge of Propagation; Richard Gerstell, Chief, Division of Game Purchases and Distribution; James N. Morton, Assistant Director of Refuges and Lands, and Leo A. Luttringer, Jr., Chief of Education.

Briefly the extended program is this: The Board, provided funds are available, will increase the number of holding pens in several different refuges to eight, surrounding them with heavy gauge wire, and providing drop gates for releasing birds when the time comes to allow them to extend their range.

The areas will be carefully supervised by

the above field personnel, all of whom are familiar with the habits of the wild turkey, and every precaution will be taken to insure protection from winged and four-footed predators. Each of the areas will contain ten acres and will be stocked one bird to an acre. Only the best breeders will be released in the enclosures thus assuring the highest quality offspring.

It is felt that an area of such size will provide adequate nesting sites and feed for the birds. The areas will be carefully selected so that each will contain the best environmental conditions, both from the standpoint of food and cover, and after they are fenced in, they will be trapped clean of predators.

The wire fence surrounding the areas will be buried about a foot deep to eliminate small predators, and the top barriers will be of sufficient strength to withstand the shock of deer which run against it or of dogs which might try to enter.

It is also the plan to transfer the first setting of eggs at the holding pens to the Game Farm for incubation. By so doing a greater percentage of hatch will be assured, because, despite all the vigilance the caretakers will be able to give the areas, there are times

**IMPORTANT NOTICE !!!**  
**DOES YOUR GAME NEWS**  
**REACH YOU IN GOOD CON-**  
**DITION, OR IS IT DAMAGED**  
**WHEN IT ARRIVES? IF IT**  
**IS NOT RECEIVED IN GOOD**  
**ORDER LET US KNOW AND**  
**WE WILL MAKE EVERY**  
**EFFORT TO INSURE**  
**BETTER DELIVERY**

when crows, snakes, turtles, or other creatures may find access to the nests and destroy most, if not all, of the eggs. By transferring the first hatch to the Game Farms, however, this possibility will be overcome. It will also greatly improve the blood strain of the game farm birds.

In all probability the hens will be permitted to hatch and rear their second brood in the enclosure, and when the young are at the proper age, both mother and poults will be allowed to roam outside of the area in order that they may range more widely. This system, judging from the opinion of all present, is expected to work out admirably, and we are all looking forward to the day when our wild turkeys will have not only increased, but improved their strain, especially those at the Farm.

With Pennsylvania's system of game refuges, with the wild turkey farm completed, with the new program outlined above, a future supply of this magnificent bird in Pennsylvania is assured. They need our help in winter to obtain a supply of food and if this is provided hunters, no doubt, will for years to come be thrilled by the sight of the splendid wild turkey and be privileged to match their wits with this, the noblest of game birds.

## THE ROLE OF CYCLES

(Continued from page 22)

days ahead with an accuracy which leaves much to be desired. Game administration spends millions of dollars with less success. Students of climatic cycles hope to forecast weather for years in advance through knowledge of climatic cycles. Students of wildlife cycles hope to predict game populations in advance through knowledge of wildlife cycles. Here our analogy ends. Climatologists can do nothing about weather. **We can do something about game.**

Research on cycles progresses slowly. There is no such thing as an organized cycle program. The hope of the Matamek Conference in 1931 was for such a program of cycle research enrolling the scattered individuals delving into the cycle mystery. That aim, that ideal of four years ago, still remains a will-o'-the-wisp.

Sixteen months ago Aldo Leopold, calling the beginning of the downward cycle a "biological eclipse," said: "So here we are on the verge of an epochal event, and only three scientific institutions have vouchsafed their men so much as a piece of smoked glass. There are dozens of game managers and biologists who want to work on the cycle, but they lack funds for field studies and laboratory experiments. Our scant existing knowledge is partly locked up for lack of publication. The handful of men who have funds got them by passing the hat. In short, the captains and the kings who officiate at scientific money-bags are not yet cycle-conscious. Another decade must go by—another score of millions of conservation funds must be spent blindfolded—before the work of deciphering this great enigma can effectively begin. Thus, and not otherwise, does conservation muddle through."

And still investigations of wildlife cycles, the greater dilemma in conservation today, exist on shoestrings. Cycle research has no money of its own. It is a vagrant, destitute and without means of support.

It makes little difference where the research be carried on so long as it is done. It is now active in but few institutions, a few mere twinklings in the conservation cosmos. Biologists can launch an assault upon the problems of population cycles; they have the inherent power to turn the twinklings into full sunlight. But—it takes money to do it. You can't get something for nothing in research any more than in a chain store. Sportsmen, the American Wildlife Institute, and other similar groups now have an opportunity to make notable progress in conservation. They can make a glorious name, gain honor and prestige by throwing the power of their financial shoulder to the wheel and rolling the conservation machine over the cycle barrier.

I have tried to show the uncertainty in our entire program of conservation due to the cycles. Conservationists are but Lilliputians trying to rope and hog-tie an invisible mystery. Upon the solution of these cycles rests the future of game management, of restoration and regional plans. Until a more thorough understanding of cycles is reached, until greater knowledge of cycles is available, plans dealing with wildlife conservation evolve in the dark and their practicability and application are fraught with grave uncertainty.



# Planting Food For Wildlife

By WILLIAM C. GRIMM

Note: This is the sixth and last of a splendid series of articles and illustrations on game foods. We are greatly indebted to Mr. Grimm for preparing them.



**DWARF SUMACH**  
(*Rhus copallina*)

**BLACK CHOKEBERRY**  
(*Pyrus melanocarpa*)



**PURPLE-FLOWERING RASPBERRY**  
(*Rubus odoratus*)

**PASTURE ROSE**  
(*Rosa humilis*)

William C. Grimm - 1936.

**Dwarf Sumach:** Resembles other sumachs as to fruit. Leaflets have entire margins and there are winged projections along the main stalk between the leaflets.

**Black Chokeberry:** Medium-sized shrub. Leaves alternate with finely-toothed margins; quite smooth. Fruit berry-like, about  $\frac{1}{4}$  inch in diameter, nearly black.

**Purple-flowering Raspberry:** Stems not prickly but covered with glandular hairs. Leaves simple, or 3-5 lobed, and finely toothed. Flowers rose-like. Very attractive ornamental; also provides some food for birds.

**Wild or Pasture Rose:** A low shrub armed with fine straight prickles. Leaflets 5 to 7 finely toothed. Fruit nearly round, orange-red. The common wild rose.

## YOUR CLUB AND MINE

(Continued from page 4)

The Executive Committee is composed of all the Chairmen of the various committees, of which a list follows: Auditing Committee; Banquet Committee; Entertainment Committee; Educational Committee; Farmer's Sportsmen Cooperative Committee; Finance Committee; Forestry Committee; Fish Committee; Game Committee; Game Feeding Committee; Game Farm Committee; Izaak Walton Trout Pond Nursery Committee; Law Enforcement Committee; Legal Committee; Legislative Committee; Membership Committee; Prize Committee; Publicity Committee; Save The Loyalsock Committee; Stream Improvement Committee; Vermin Control Committee; Water Committee.

The most essential of these are Membership, Publicity, Entertainment, Law Enforcement, Game Feeding, Stream Improvement, and Fish and Game Committees.

It is necessary to have Directors who are active and well distributed. This association has 187 Directors, distributed according to membership throughout the county, with at least one in every precinct.

This set-up is very helpful to the Game and Fish Commissions in gathering together information and also in distributing game and fish. It also better promotes the activities of the organization.

To have a successful organization, it is essential to keep interest stirred up; first by giving every one a job to do, then by having interesting meetings. We hold monthly Directors meetings, mostly dinner meetings, some of which are in the smaller towns and rural districts, usually at some church which furnishes the dinners. At all of these meetings the public is invited to attend. Here we transact our business, usually have some speaker or moving pictures, and sometimes both. In this way we show to the public the work we are doing for them, thereby gaining their support and membership.

This association has its own Game Farm in Williamsport, where we have a capacity for rearing 1,000 ringnecks, and have been very successful in doing so. It also sponsors what is known as the Trout Pond Nursery on route No. 220 between Muncy and Hughesville, where we have a capacity for rearing both brook and brown trout in large numbers for distribution in Central Pennsylvania.

The pictures accompanying this article will convince you, when I say we have one of the best Sportsmen's picnics held any place. This is one of the best ways to keep up the interest in the association. It is an annual affair, always held the last Wednesday in July.

At this picnic are held all the sports enjoyed by Sportsmen. Regular trap shooting contests (three traps); a Wild Cat trap, large bore rifle at Bull's-eye targets, also a Running Deer, small bore 22 cal. at small discs and with telescopic sights at "Gopher" targets. There is also pistol shooting, archery bait and fly casting, and many other events for which substantial prizes are given, winding up with a hot cafeteria dinner. Along with the above, there are always some special events put on by experts, such as, fancy riding by the State Police, polo games, etc.

When you become more interested in telling of the fine time you had and what you

(Continued on page 25)



## YOUR CLUB AND MINE

(Continued from page 24)

saw, than wanting to be able to tell you got the bag limit; when you are satisfied to take your share only, that is, only what you can use, leaving some for the next year; when you are willing to conserve for the next generation the sport you are now enjoying; then and only then, can you call yourself a Sportsman.

Sportsmen! Either join some local organization, or if there are none in your county, start one. Any adjoining association officials will be willing to help you. Once you are started see that your association becomes affiliated with the state-wide association—the Federation of Sportsmen's Clubs of Pennsylvania. Take active part in your association, as there is always a place for you somewhere. Don't be backward in letting the officers know you are willing to help; they are looking for just such fellows.

Put your organization behind the Game Commission and its field officers, and with this support, they can curtail the violations of the Game Code. When it once becomes known that the sportsmen will report violations, and appear as witnesses against the violators, we will then have very few violations.

## ENTER HAWK—EXIT MOUSE

(Continued from page 17)

came to my attention, and on checking over the stomach contents I found that every one contained meadow mice exclusively.

A short time before this the city forester brought a number of girdled pines to me and sought information as to the cause of this high mortality rate among the young trees. I accompanied him to the watershed, and noticed that an appalling number of the infant trees had been girdled by meadow mice — most of the work having evidently been done under the cover of snow.

In some areas where there was an abundance of ground cover, the proportion of loss must have been upwards of 40 per cent, and in certain spots practically every tree over a diameter of 100 feet had been completely girdled close to the ground and consequently killed.

After a survey of these conditions, it was not difficult to convince the head of the water bureau that what was needed on the area was not less hawks, but more hawks, and orders were given that no more shooting of birds of prey was to be permitted.

The writer is not a fanatic on the hawk question. Far too often has he seen the havoc that the long-tailed accipiters can play among the other bird life, but he is firmly of the belief that sportsmen, farmers, foresters and conservationists can get together on a middle ground and see the complicated problem of wildlife relationships as it is. Blind partisanship and such statements as "The only good hawk is a dead hawk," achieve nothing.

There have been sufficient data gathered by the Department of Agriculture and the various State investigations, such as ours in Pennsylvania, to make the actual feeding habits of the hawks and owls no longer a matter of conjecture, but of actual knowledge.

The fact that Ringnecked pheasants and

(Continued on page 27)

# THE STARLING AND THE COWBIRD

By DR. GEORGE M. SUTTON



**T**HE STARLING, which walks on the ground like a crow, was introduced from Europe about fifty years ago, and has since extended its range so rapidly it is one of the most abundant birds of Pennsylvania. It is very gregarious and, save in the spring, is usually seen in immense flocks, walking through fields or wheeling about in the air, with fluttering flight.

It is a little smaller than a Robin, with a long, pointed bill and short tail. The plumage is black, highly glossed with blue, green, purple, and violet, particularly on the neck. All of the feathers above are more or less broadly tipped with creamy or buffy, and the bird is unspotted below save on the sides and flanks.

It nests early, utilizing all-available cavities, and if there are not enough to go round, it permits Flickers or Red-headed Woodpeckers to dig one and then ousts the owners and uses the new cavity for its own nest. It has been known actually to kill Flickers in driving them from their newly made nests. As Starlings become increasingly abundant, there is grave danger of their making it difficult for some of our birds to rear their young at all.

The Starling is a great mimic. It has a characteristic, high, thin squeal and numerous chuckling notes, which it intersperses with imitations of the Wood Pewee, Bob-White, and other well-known birds. As it sings, it puffs out its throat-feathers, and during spring shakes its wings in ecstasy.

Favorable remarks must be made concerning the food-habits of this bird. It eats, especially during spring and summer, much noxious insect life, noticeably larvae which it finds in lawns and fields, and it preys upon the dreaded Japanese beetle. As its natural enemies come to assert themselves, it may eventually become a desirable bird citizen.

Starlings roost together in great numbers. They like to congregate in barn-lofts, cupolas or steeples, or along the high window-sills and cornices of buildings where they squeal all night as they crowd each other, or take short flights in the soft glow of the electric lights.

**W**HEN the Cowbird comes in spring he is usually concerned over his mating, and while he is not a songster, he puts much energy into his high, thin squeak as he bows, almost upside down, with wings and tail outspread, in the top of some tree. This same high note is often to be heard as the birds, in groups of three or four, pass over, undulating slightly in the manner of their tribe.

On the ground, the Cowbird walks in a quiet and dignified manner. It may be seen in pastures, sometimes perching on the cows' backs where it captures insects. I once saw a flock of them remain an entire morning near a newly born calf, evincing great interest in the little creature and its mother.

The head, neck and breast of the male Cowbird is a coffee-brown with faint purple gloss. The rest of the plumage is black with greenish reflections. The female is dull gray all over.

The female is an expert at locating nests. Evidently she watches smaller birds, learns where they are building nests, and then while they are not watching her, slips in and deposits her egg. Sometimes the egg is laid long before the nest is completed. Occasionally, when an egg is thus deposited before the rightful owner of the nest has laid her eggs, the little birds build another bottom in their nest, sealing the heavy egg beneath the hair and vegetable fiber. Yellow Warbler nests are thus sometimes several stories high, and I have more than once found eggs sealed into the foundation material of the nests of larger birds. I remember one Scarlet Tanager nest which held two eggs of the owner and four of the Cowbird, and there was an additional Cowbird egg sealed in the foundation material.

Being larger than his nest mates, the young Cowbird claims the most attention. He may actually push the other young and eggs out of the nest.





## THE ELK IN PENNSYLVANIA

(Continued from page 7)

Various authorities have estimated that the normal annual increase to be expected from elk in the wild state approximates 10% of their total number. By detailed manipulation of the figures presented on the chart, it is possible to calculate roughly the population trend of the Pennsylvania elk herd from 1913 to 1935 and by so doing, it will be found that apparently from 1913 through 1923 the herd maintained or exceeded the expected normal increase; that from 1924 through 1927 the increase was probably slightly less than normal; and that from 1928 through 1935 the rate has constantly remained far below the expected normal.

Finally, the figures on the chart, together with 1936 population statistics, seem to indicate that the Pennsylvania elk experiment, though partially successful in the past, is doomed to failure.

Since the trends of the newly established elk herd have been pointed out, it is not amiss to attempt an explanation of the same.

When the first animals were stocked, they were placed in certain refuges in the northern half of the State where range conditions were most suited to them. Being also under legal protection, a rapid increase naturally would be expected and actually took place. Almost immediately, the animals evidenced their known tendency toward extended wanderings and their apparent preference of grazing over browsing. Accordingly, they moved to the richer agricultural areas bor-

dering the forest country where they grazed on farm crops, found shelter in the woods and proceeded rapidly and successfully to propagate under the ideal conditions encountered.

Because of excessive property damage wrought by the animals, it soon became necessary to remove them from the farming sections and to limit them to the larger expanses of wooded mountain country. So limited, they continued to show a yearly increase from 1923 through 1927 even though faced with an annual open season.

Up until about 1928 the elk had one all important factor in their favor, namely, a comparatively small amount of human interference. There were no large lumber operations in progress and the vast unbroken woodlands in the north-central part of the State were not readily accessible to a large number of people. Even the hunters were from 1913 through 1927 not particularly numerous in the elk country. Fewer licenses were sold than in recent years and the gunners were principally attracted to the more southern mountain districts which were more easily reached from the great population centers and which then supported the heaviest deer populations common to the State.

By 1928, an improved and greatly extended highway system, together with an increased number of better and faster automobiles, rendered the forest areas of the north-central counties readily accessible to the summer traveler, while an increased deer population attracted an ever greater

proportion of an enlarging army of hunters to the region. The net result of the same was that the elk herd was almost constantly subjected to human contact in one form or another.

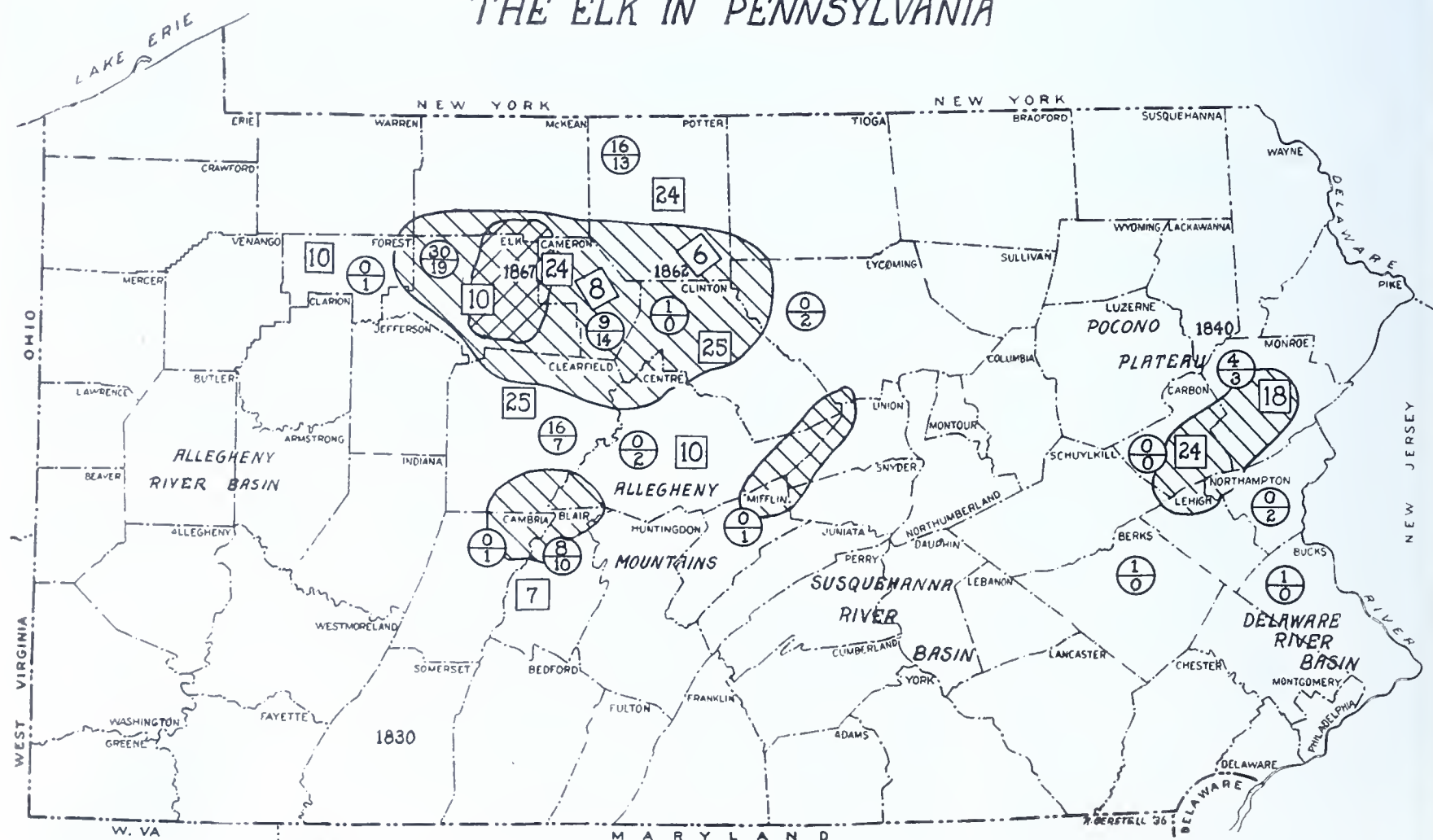
Since the elk is by nature a rather "high strung" animal apparently unable to suffer human interference, a greatly reduced annual increase accompanied the expanding influences of civilization and the animals have finally been driven back into those same areas where they last existed approximately seventy-five years ago.

Under the influences during the past few years brought to bear by the "opening-up" of the last wilderness areas, chiefly through the construction of roads by the C.C.C., the elk population has become so small that its individual members have assumed that inexplicable psychological status whereunder they cease to reproduce their own kind and are once more doomed to extinction even though rigidly protected by law.

A continued plan of restocking at regular intervals might possibly prevent immediate extinction and assure a constant elk population which would afford enjoyment to a very limited number of persons who were so fortunate as to occasionally glimpse one of its members, but under present conditions, any program designed to allow the hunters to reap an annual or even occasional elk crop are destined to failure.

For the reader's convenience, the history of the elk in Pennsylvania as herein described is graphically portrayed on the map attached hereto.

## THE ELK IN PENNSYLVANIA



■ - Last Range Of Native Elk    ■ - Range Of Reintroduced Elk 1913-36  
 10 - Elk Released In County 1913-36    1867 - Extermination Dates  
 ③ - Elk Killed 1913-36 - Upper Number Legal Bulls - Lower Number Illegal Or For Damage  
 Total Legal Kills - 98, Other 78 Here Shown - Legal 86, Other 75    ♦ - Populations 1936



# TRAP SHOOTING

## MARSHALL SHOOT

### First Day

In the 16 yd. five hundred target race over the T. C. Marshall traps, Yorklyn, Delaware, on Wednesday, August 12, these Pennsylvanians made scores: D. E. Moore, York, 469; R. E. Shriever, Philadelphia, 473; Fred Hess, Boyertown, 475; John A. Messimer, 485; C. G. Haney, Philadelphia, 457; Harry Nice, Abington, 480; Frank A. McCormick, Abington, 476; George A. Patterson, Jenkington, 473; W. H. Pearson, Bethlehem, 487; J. M. Stinson, Bradford, 475; S. M. Crothers, Chestnut Hill, 489; H. B. Slack, Lancaster, 95x100; T. Clarence Marshall, Kennett Square, 479; Carl Rautenberg, Chestnut Hill, 474; Elmer E. Miller, Millersburg, 463.

Professional scores: J. M. Hawkins, Camp Hill, Pa., 489; Arthur Cascaden, Tampa, Fla., 471; Norman A. Wright, Wilmington, Del., 490; Capt. J. B. Grier, Rockland, Del., 494.

Three tied for high honors, each dropping four out of five hundred. Other shooting aces who performed admirably were: Joseph F. Heistand, of Philadelphia, 1935 amateur champion of North America; Ned Lilley, the Michigan titleholder, and Phil Miller, French Lick Springs, Indiana.

Dr. I. S. Lilley, Stanton, Michigan, father of Ned Lilley, is also a great marksman. He went down but nine in the 500 race. Pennsylvanians turned out in large numbers. Sixteen of the fifty shooters that participated were Keystoneers.

### Second Day

On the second day Walter Beaver, Berwyn, and R. C. Coffey, Orlando, Fla., stalemated 174x175 from the 16 yard line. Ned Lilley and Joe Heistand, the Western cracks were runnerups with each dropping two out of the 175 clays. J. Mowell Hawkins, Camp Hill, professional, was high over his colleagues with 169.

Other Pennsylvanians who made good scores on the second day were: Clark Aber, Easton, 152; W. L. Spann, Brandywine Summit, 138; Ottis H. Skidd, Wilkes-Barre, 172; J. W. Eshleman, Jr., Lancaster, 165; H. M. Nichols, Philadelphia, 166; T. C. Marshall, Kennett Square, 161; Roy Hemming, Reading, 157; H. A. Trout, Boyertown, 166; E. M. Rhoads, 130; E. D. Gresh, 143; H. B. Hostetter, 146; J. M. Stinson, 164; J. B. Fontain, 159; S. M. Crothers, 170; C. A. Grove, 155; R. E. Downs, 138; R. C. Helt, 160; A. P. Davey, 164; R. S. Miller, 160; L. E. Sentz, 155; E. F. Hill, Hughesville, 161; Lee L. Koblin, 163; E. F. Mills, 147; C. S. Bowers, 156; A. L. Miller, 165; Joseph Junglass, 172; G. B. Scarlett, 150; H. B. Tulley, 159; M. R. Horan, 152; Robert R. Bush, 158; S. R. Greenley, 158; G. M. Leed, 136; Fred Hess, 155; C. R. Patchell, 156; Steve Sobecko, 160; George D. Baldwin, 172; C. H. Newcome, 163; W. H. Pearson, 171; George Newmaster, 155; Charles Francisco, 157; A. D. VanAtta, 151; E. M. Horne, 160; J. A. Ginrich, 166; Edward Mueller, 157.



### Third Day

During the third day's shoot the world's record was broken. The squad that held the title broke their own record by one target. In 1935 the same squad broke 498x500 and at this match they went 499x500. The squad comprised Ned Lilley, Joseph F. Heistand, H. C. Jones, William Eldred, and Arthur Cascaden. Mr. Cascaden is a professional. Lilley missed his 64th "rock" and the others broke 100 straight.

Mrs. Ralph Paddock, New York State woman champion, topped a field of eight contestants, 168x175. Miss Bettie Wester, Germantown, Pa., was runner-up with 167; while Mrs. Joseph S. Murphy, New Jersey woman champion, was third. Other women contestants were: Miss Ruth Guthert, Va., 162; Mrs. Fred Hess, 159; Mrs. Mary Conde, N. J., 157; Miss Joan Abey, Md., 150; Mrs. T. C. Jackson, Stormville, N. Y., 140.

The day before Mrs. Fred Hess, Boyertown, Pennsylvania Woman champion, carried off the honors of her sex, 156x175.

E. B. Chamberlain, Martville, N. Y., and Joseph Heistand, Hillsboro, Ohio, each broke 175x175. There was no shoot off, the former winning the trophy in a toss.

In the 175 target race, Joe Heistand, the Hillsboro, Ohio, ace, went straight and H. C. Jones, Alton, Ill., was runnerup with 174. D. F. Beck, Havre De Grace, Md., tied with Jones, 174. Some of the Pennsylvanians who were in there with good scores were Al Mullhaupt, Bradford, 170; W. H. Pearson, Bethlehem, 172; S. M. Crothers, 173; J. M. Stinson, 170; J. W. Eshleman, 171; J. Mowell Hawkins, was high again with the professionals, 174; Norman Wright, 173; Arthur Cascaden, 171; Henry Winchester, 148; F. C. Jussen, 148; W. H. Cox, 162.

### Last Day

The final day's match brought out a big field of shooters. The handicap events took place. C. B. Platt, Bridgeton, N. J., from the 21 yard line, smashed 144x150 from the 25 yard line. H. G. Tulley, president of the Roxboro Gun Club, was third with eight down. From the 17 yard line Mrs. Mary H. Conde, Morristown, N. J., carried off the honors with her sex. 1100 targets were thrown in the four days. Heistand was high over all with 1083 dead birds, and Ned Lilley was runnerup with 1076.

25 yard—Chamberlain; second, Jones; third, Heistand.

23 yard—Mullhaupt; second, Holloway; third, Eldred.

19 yard—Tulley; Simon; Chapman.

17 yard—Shaffer; Mrs. Conde; A. B. Stout.

High Professionals—Hugh Falls, Port Deposit, Md.



## QUESTIONS AND ANSWERS

Q. What birds are not protected in Pennsylvania?

A. The Blue Jay, English Sparrow, Starling, Kingfisher, Turkey Vulture, Crow, Goshawk, Sharp-shinned Hawk, Cooper's Hawk, Broad-winged Hawk, Red-tailed Hawk, Red-shouldered Hawk, Marsh Hawk, Rough-legged Hawk, Duck Hawk, Pigeon Hawk, Barred Owl, Great Horned Owl, and Snowy Owl.

Q. What mammals are not protected?

A. Foxes, wildcats, weasels, porcupines, woodchucks, chipmunks, and all other wild animals except game and fur-bearing animals.

Q. Is a license necessary to raise and sell game?

A. Propagation License, costing \$1.00 per year, obtainable at the offices of the Game Commission, Harrisburg, is necessary to raise and sell game.

Q. Is a license necessary to possess a ferret?

A. Yes; such licenses cost \$1.00 and must also be secured at the Commission's offices.

Q. What does a taxidermy license cost?

A. \$25.00.

Q. Is a license necessary to buy furs and resell them to licensed dealers in Pennsylvania, and if so what does it cost?

A. A license is necessary, and costs \$5.00.

Q. May non-resident dealers buy and receive furs for commercial purposes in Pennsylvania?

A. If they first secure a fur-dealer's license, which in this case, costs \$50.00.

Q. Is a license necessary on the part of Pennsylvania dealers to buy and resell out of the state?

A. Yes; this type of license costs \$10.00.

Q. Is it legal to possess live fur-bearing animals in captivity?

A. Yes, providing same are taken legally during the open season.

Q. How long may game be kept after the season closes?

A. Only thirty (30) days.

Q. May bow and arrows be used in killing game?

A. Yes.

Trap, rifle and revolver marksmen should not pitch quoits if they want to maintain their accuracy in shooting, says a well-known sportsman.

## ENTER HAWK—EXIT MOUSE

(Continued from page 25)

rabbits are more abundant on the area which I have described, than in any equal area with which I am familiar, amply demonstrates that the six species of hawks and owls most abundant on the area, namely, the Red-tailed, Red-shouldered, Rough-legged, Marsh and Sparrow hawks, and the Barn and Short-eared Owls, will pay little attention to anything else, so long as their natural food, the meadow mouse, is abundant and easily obtained.



## THE LAST HUNT

(Continued from page 11)

While drinking in the beauty of the scene, I called Ray to come in and take the shot. But he decided to stay where he was, saying it was my place to flush for my dog and take the shot. Determined to let the bird go over to Ray, I walked in, figuring that the woodcock was bound to go in Ray's direction because Kiki and I were on the other side of it.

Darn contrary little doodle, up it went, around it came and headed straight in the wrong direction. I hesitated a moment but couldn't let Kiki down after that kind of work, so I took what I thought was an aim and fired just as the bird dropped down under my load. Desperately I swung down and fired the left barrel. But the woodcock flew merrily on and there was I, feeling foolish, my record smashed to pieces on a perfectly open, easy straight-away shot. Gosh, I hated to tell Ray and Kiki I had missed. Why couldn't it have been a hard shot so I could have had some semblance of an alibi?

I'll hand it to Ray, he didn't kid me—much. When that bird dropped under my shot, I believe it knew what it was doing. We could only guess where it landed, for it went over a small hill. So we cut around, went too far to the left and after we were well past it, by luck I saw it get up quietly and go back over the hill. If something hadn't made me turn my head just then, we would never have located that bird again. If that isn't being a sly old game bird, then what is?

Back we went, Ray at my right where I figured the bird would be, with Kiki close by, so that the bird would not flush too far ahead. Well, once again luck was against Ray. That bird, after passing out of sight, had circled around to the left. Just as Kiki hit her point, out went the woodcock off to my left. As it started to raise up over a sand bank, I broke my rule again and put a stop to the game of hide-and-seek. For the first time, I had shot my limit in woodcock.

So ended the hunt for not another bird was to be found. It was soon noon and Ray had to be home for dinner. On the way back, we talked over how easily the birds had fooled us and Kiki's beautiful work, promising ourselves another trip soon.

But it was not to be. That was my last hunt over Kiki. A grand hunt with a fine companion and a great little dog. I had had my limit in fun, in birds—and—in Kiki. She still nestles in my heart.

## GAME OFFICIALS AT CAMP PERRY

Messrs. John Ross and Hayes Englert, well-known game officials, upheld their shooting prowess at the recent National Rifle and Pistol Matches, at Camp Perry, Ohio. These two marksmen, who, for three years, held the championships with the Pennsylvania Game Commission's pistol team, gave a splendid account of themselves in a big field of competition at Camp Perry, and by so doing carried off a number of individual trophies which they highly prize. George W. Cross, of the Pennsylvania Fish Commission was there, and his pistol marksmanship was exceptional.

1936 Seasons and Bag Limits  
9:00 o'clock hunting on First Day Only

Below is a summary of open seasons and bag limits provided by State and Federal statutes and by resolution of the Board of Game Commissioners, under date of July 1 and 2, 1936, as provided under authority of Section 509 of the Game Code as amended. The open season includes both dates given, Sundays excepted, the small game and trapping seasons, except waterfowl, beginning at 9 A.M. on the first day of the general open season, and the opening day of the muskrat and beaver seasons.

UPLAND GAME (Small game possession limit 2 days' bag)	BAG LIMITS Day	OPEN SEASONS
*Wild Turkey (See counties closed below) .....	1	1
Ringneck Pheasants, male only.....	2	8
Ruffed Grouse .....	2	8
Bobwhite Quail, Gambel Quail, Valley Quail (the combined kinds) .....	4	20
Blackbirds .....	Unlimited	
Rabbits, Cottontail .....	4	20
Squirrels, Gray, Black and Fox (the combined kinds).....	6	20
Squirrels, Red .....	Unlimited	Nov. 6-Nov. 26
Raccoons, all counties, by individual or hunting party.....	2	10
Bear, over one year old, by individual or hunting party.....	1	1
Deer, Male with two or more points to one antler.....	1	1
Deer, Male as above, by hunting party .....	6	6
		Nov. 6-Aug. 15, 1937
		Nov. 6-Dec. 31
		Nov. 23-Nov. 26
		Dec. 1-Dec. 12

NO OPEN SEASON—Hares (Snowshoe or Varying), Reeves Pheasants, Hungarian and Chukar Partridges, Elk, Antlerless Deer, and Cub Bears

MIGRATORY GAME (Possession limit one day's bag)	BAG LIMITS Day	OPEN SEASONS
Rails, except Sora.....	15	Unlimited
Sora .....	25	Unlimited
Gallinules .....	15	Unlimited
Woodcock .....	4	20
Suise, Wilson or Jack.....	15	Unlimited
Wild Ducks (See protected species below) .....	10	60
Wild Geese (Brant closed).....	4	30
Coots or Mudhens.....	15	Unlimited
		Sept. 1-Nov. 30
		Oct. 15-Nov. 14
		Nov. 1-Nov. 30

The species of waterfowl on which there is no open season are Red-head Ducks, Canvasback Ducks, Wood Ducks, Ruddy Ducks, Buffleheads, Swans, Snow Geese and Atlantic Brant. No baiting or live decoys.

Magazine shot guns limited to three shells at one loading.

A FEDERAL DUCK STAMP IS REQUIRED OF EVERY MIGRATORY WATERFOWL HUNTER MORE THAN SIXTEEN YEARS OF AGE. STAMPS ARE ON SALE AT POST OFFICES.

## HUNTING METHODS AND RESTRICTIONS FOR TAKING MIGRATORY BIRDS

Migratory game birds may be taken with shotgun only, not larger than 10-gauge. Repeating shotguns to hold not more than three (3) shells. The magazine may be cut off or plugged with a one-piece metal or wooden filler incapable of removal through the loading end, to reduce the capacity of the gun to three (3) shells at one loading.

Use of blinds and aid of dogs permitted.

The use of live decoys and sinkboxes and use or aid of any automobile or aircraft of any kind is prohibited.

Any boat or floating craft propelled by hand power is permitted, but the use of any power boat, sailboat or other boat under sail, and any craft or device of any kind towed by power or sailboat, is illegal.

No baiting of waterfowl is permitted.

No aircraft, power boat or floating device of any kind may be used to concentrate, drive, rally, or stir up waterfowl.

Waterfowl and coots may be hunted between 7 A. M. and 4 P. M. standard time, only. On all other migratory game birds in season, including rails, snipe, woodcock, etc., shooting is permitted between 7 A. M. and sunset, except on November 6, when hunting for such birds is not lawful before 9 A. M.

Migratory game birds may not be possessed longer than ten (10) days after close of the season.

## FUR-BEARERS (Traps not to be set before 9 A.M. the first day)

Minks, Opossums, Skunks.....	Unlimited	Nov. 6-Feb. 28, 1937
Muskats (by trapping only).....	Unlimited	Dec. 1-Mar. 15, 1937
Beavers (by trapping only).....	3	Mar. 1-Mar. 15, 1937

## NO OPEN SEASON—Otters

\*No open season on Wild Turkeys during 1936 in Berks, Bradford, Bucks, Cameron, Carbon, Clarion, Clearfield, Dauphin, Elk, Fayette, Forest, Jefferson, Lackawanna, Lebanon, Lehigh, Luzerne, Lycoming, Monroe, Northampton, Pike, Potter, Schuylkill, Tioga, Warren, Wayne, Wyoming and York Counties.

## GROUPS HUNTING SMALL GAME

In the interest of safety, the Commission recommends that parties hunting small game be limited to five (5).





PENNSYLVANIA  
BOARD OF GAME COMMISSIONERS  
BUREAU OF REFUGES & LANDS

**STATE GAME LANDS  
NO. 45.**

VENANGO COUNTY  
CLARION COUNTY  
GRANDERY, ROCKLAND, PINECREST & HIGHLAND TOWNSHIPS  
CLARION COUNTY  
ASHLAND & ELK TOWNSHIPS

**LEGEND**

State Game Lands  
County Road  
Township Road  
Private Road  
Railroad  
River  
Creek  
Lake  
Marsh  
Swamp  
Grassland  
Forest  
Shrubland  
Water



**SAFETY FIRST**

**BEFORE  
YOU  
SHOOT**

**STOP**

**BE  
CAREFUL**

**LOOK**



**Pennsylvania Board of Game Commissioners**  
Harrisburg, Pa.



# PENNSYLVANIA GAME NEWS

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November, 1936

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# PENNSYLVANIA GAME NEWS

(Published monthly by the Pennsylvania Board of Game Commissioners)

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Notify the Editor immediately of any change of address. Such promptness on the part of the subscriber will greatly facilitate the handling of the NEWS.

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# EDITORIAL

VOLUME VII

NOVEMBER, 1936

NUMBER 8

## IS THE GAME WORK UNDERFINANCED?

THE April, 1936 issue of the GAME NEWS contained an article entitled "Spending the Sportsman's Dollar," written by Nelson E. Slaybaugh, the Comptroller in charge of the Game Commission's finances.

In that article it is shown how the sportsman's license fee of \$2.00 is budgeted and expended. After the statutory requirements are budgeted, it is therein stated:

"Balance available to the Game Commission for all other expenses of game administration, which includes general protection, law enforcement, game propagation, and distribution above statutory requirements, research, education and administration, \$.57."

Then the article further shows just what is expended for each activity out of the remaining fifty-seven cents. Out of it all the costs of administration, salaries and traveling expenses are paid; also the cost of operating four game farms, salaries of the officials in charge of administration and their traveling expenses, and the office supplies and incidental expenses of their offices and assistants.

How much advancement could a Game Commission be supposed to make with only fifty-seven cents to expend for the real part of game protection and administration? How much additional stock could it buy and distribute, or propagate?

If the sportsmen would obtain Mr. Slaybaugh's article, reprints of which are available, and study it carefully, they would find that there can be no advancement unless more money is provided.

Fifty-seven cents is not the price of one rabbit purchased for liberation. It is not one-half the cost of one mature pheasant or quail raised or purchased for liberation. Your whole \$2.00 license fee would purchase one mature ringneck.

When we take the \$2.00 license fee into consideration and begin to pare it down: ten cents off for County Treasurer's fee; seventy-five cents off for land acquisition and maintenance; twenty-seven cents off for bounties; and cut thirty-one cents more off for the statutory game purchase, deer proof fences, bear damage, insurance and retirement fund, it is pared down too closely to meet the necessary requirements of practicable game administration.

I am advising the sportsmen to correct this matter, and to vote at their conventions and meetings that the resident hunter's license fee be increased to \$2.60, leaving \$2.50 net to the Department after the Treasurers' fees are taken out. If the sportsmen approve this much needed increase, the Game Commission will then be in a position to include a strong recommendation when revising the Game Code for consideration of the next legislature.

If we would have more game, we must pay more in order to provide and maintain breeding stock, more feed and cover on our game lands, a wider distribution of game for stocking, and better enforcement of our game laws. If the available funds were \$2.50 net, the Commission could do better, but fifty-seven cents, the amount now available for the purposes stated above, is cutting it too thin for effective administration.

Sportsmen, think this matter over carefully.—J. Q. CREVELING, *Vice-President*

## PLAY SAFE—AVOID ACCIDENTS

"SAFETY First" must be every hunter's slogan this fall. The time has come to stamp out careless hunting in Pennsylvania!

For the past several years the Game Commission has been trying to make hunters safety minded. We have resorted to every known means to accomplish this purpose. Despite repeated warnings, however, careless fools still roam our fields and woodlands with little regard for their lives, or the lives of their companions. Avoidable accidents, far too many, continue.

This year the Game Commission has determined to take the bull by the horns. Preaching safety has ceased to be a virtue. From now on no member of the staff will rest until every legal means at our command has been employed to bring the criminally careless to justice.

We have advocated wearing red for years, and what has been the result? Out of twenty special hearings held during the past year for careless shooting, we have learned that, with one or two exceptions, neither the victims or members of their party, nor the persons convicted or members of their party, wore one bit of red.

Hunters cannot afford to ignore this simple safeguard. If they do, it may cost them arms, legs, eyes—LIVES. Neither can they afford to mix firewater with firearms. Hunters who permit their companions to go afield with a deadly weapon while under the influence of intoxicating liquor are just as much to blame for any catastrophe as the offending individuals themselves; furthermore, they are courting disaster every minute.

There are laws on the books which have plenty of teeth for clamping down on careless hunters, and those teeth **WILL** be clamped down. These statutes enable the Board to prosecute for carelessness and negligence, and to institute criminal charges in cases where individuals kill human beings in mistake for game.

Already the tentacles of this legal octopus have reached far and wide, and of the twenty aforementioned hearings only four escaped their powerful clutches. One escaped because of insufficient evidence; another is being held pending a reversed decision; faulty mechanism in the weapon saved another; and in the other criminal prosecution had already been brought, therefore the Game Commission had no jurisdiction.

The remaining offenders did not get by so easily. Sixteen of them had their licenses revoked for a total of sixty-nine years; thirteen, for five years; two, for three years; and another for one year. The twenty cases involved five fatal and fifteen non-fatal accidents, and occurred in fifteen counties of the State.

Future hearings will be held as rapidly as cases are reported. The time has come to drive the careless hunter out of the field. We want our sportsmen to look forward each season to a lot of pleasure and hunting success, not with apprehension of sorrow and distress. Our fields and forests must be made safe for ALL hunters, or they will be safe for none.

Remember, a gun in the hands of a novice or a nit-wit becomes a real hazard not only to himself but to all others. And when you go hunting—GO HUNTING! Keep your mind on what you are doing. Look before you shoot.—NICHOLAS BIDDLE, *President*





# THANKSGIVING

Brave and high-souled Pilgrims, you who knew no fear  
How your words of thankfulness go ringing down the years;  
May we follow after; like you, work and pray  
And with hearts of thankfulness keep Thanksgiving day.

—ANNETTE WYNNE





# CURRENT TOPICS

## MOSQUITO CONTROL INJURIOUS TO WILDLIFE

The spraying of marsh lands by airplanes in Delaware County, which is being carried on under the supervision of the United States Mosquito Extermination Commission, is detrimental to wildlife, according to Acting Game Protector Joseph H. Palmer.

Protector Palmer, in company with Messrs. J. J. Lynch, aquatic expert of the Biological Survey, and P. G. Platt, member of the Pennsylvania Sanitary Water Board, recently made an investigation of the project and found most of the vegetation, including wild rice, excellent food for waterfowl, has been destroyed.

They also noticed a great scarcity of waterfowl and shore birds compared to former years. They believe that the airplane, flying low over the marshes, drove them away.

The construction of approximately 30 miles of drainage ditches adds still another menace to the wildlife problem in that section.

The Game Commission fully recognizes the bad features of such an undertaking and will make every effort to solicit the cooperation of federal agencies in an effort to halt it.

## HIGHLIGHTS OF THE INTERNATIONAL CONFERENCE

The International Association of Game, Fish and Conservation Commissioners jointly with the American Fisheries Society held its Thirtieth Annual Convention at Grand Rapids, Michigan, August 31 to September 5, contributing much toward the future of game and fish management in this and other countries. Several noted foreign delegates attended the big conclave, including Senor Juan Zinser, Chief of the Fish and Game Department of the Republic of Mexico; Dr. W. Rushton of London, England; Dr. Rodalfo von Ihring of Brazil, and others. More than the usual number of Canadian and United States officials were represented.

The most impressive discussion of the entire conference was a presentation by Mr. P. J. Hoffmaster, Director of the Michigan Conservation Department, entitled "The Balance Wheel of the Conservation Machine." Michigan has been operating since 1921 with a seven man Commission, with staggered six year terms, the Director serving as the Executive Officer. Each of the seven members makes a special study of one phase of the departmental activities. The average term of service of the Division heads is about twelve years. Field officers are known as "Conservation Officers" and operate under a departmental merit system, which amounts to civil service. Officers are selected by competitive examination. The department is kept out of politics largely because the Governors themselves have been interested in conservation and allow it to operate on a non-political basis.

## FLASH

**PLEASE REPORT ALL  
BANDED BIRDS YOU KILL  
TO THE GAME COMMISSION,  
HARRISBURG, PA.**

The Commission maintains its own research staff, recruited mostly from university and state college courses, and has the full support of metropolitan newspapers, most of which have full time conservation editors who run special weekly conservation pages devoted to Michigan woods, waters and wildlife.

Mexico is making rapid strides in the conservation movement. This is especially true of migratory wildfowl protection under the new treaty with the United States. Senor Juan Zinser said that many forests, parks and wildlife refuges are now being established.

Dr. H. L. Shantz, Chief of the Game Management Division, United States Forest Service, discussed the vital problem of the unbalanced ratio between game and food supply. The only feasible way of righting this, Dr. Shantz stated, is by regulated hunting, or starvation will follow. He does not believe that the Forest Service should ever attempt to kill off surplus game through its own forces. He asked the state officials to cooperate in the management of wildlife on National Forests and assured his audience that the Forest Service will not use its authority to manage wildlife on National Forests unless the states will not cooperate.

Commissioner E. V. Willard of Minnesota, who was unable to be present due to illness, was represented by Dr. Thaddeus Sorber, head of the fish work. He read Commissioner Willard's paper in which he suggested an analysis of the regulatory powers of the State and Federal Governments to

determine the responsibility of each for wildlife. He warned against dual responsibility because it will wreck state administrative agencies.

Jay N. Darling was unable to be present but sent a message in which he said organization, recognition and money are what wildlife needs most. He stated the General Wildlife Federation is going forward very satisfactorily, and that at least 26 states have organized federations of one kind or another, functioning in cooperation with the new General Wildlife Federation. He held that the principal work must be done within the states. Darling's objectives as stated are: (1) Legal recognition of wildlife. (2) One centralized Federal agency to handle wildlife administrative work for the Federal Government instead of being scattered in many departments, and (3) a money-getting campaign.

Mr. Herbert Davis, Executive Officer of the California Fish & Game Commission, in extemporaneous remarks, stated that what wildlife needs most is the development of a wildlife philosophy and men with courage and money. To get the funds he recommends raising license fees generally, but in his opinion courage on the part of the administrators is the most essential thing.

The convention was very interested in the remarks of Dr. Ira N. Gabrielson, Chief of the United States Biological Survey, who outlined the work done by his Bureau during the past year. The Biological Survey is now making a study of all the game management plans of the various states to learn which hold the most promise for success. He stated that there is a remarkable increase in interest among farm extension workers and farmers in wildlife and strongly urged that every state should encourage the landowner to cooperate.

Dr. Gabrielson also reported the progress that is being made in waterfowl conservation and restoration. He said he believes a reduction in the annual kill is essential until new breeding grounds are properly stocked and that the sportsmen are not entirely responsi-



Vernon T. Warfel, Superintendent Jordan Game Farm, Lawrence County, and part of the 1900 ringneck pheasants being held for breeding next year.





**His Big Moment**



ble for the dissemination of the waterfowl as many claim. More waterfowl was killed than was raised until last year. With new policies, however, this should not occur again.

The Joint Time and Place Committee of the two organizations voted to hold its next annual meeting in Mexico City, beginning August 23, in compliance with a special invitation from the President of the Republic to help that country put its wildlife house in order.

The officers of the International Association elected for the coming year are: Charles T. Thompson of Illinois, President; Frank B. O'Connell of Nebraska, Vice-President; Arthur L. Clark of Connecticut, Vice-President; Ray P. Holland of New York, Secretary-Treasurer; Judge Lee Miles of Arkansas, General Counsel. Seth Gordon, Secretary of the Pennsylvania Game Commission, was added to the Executive Committee.

Persons who gather bittersweet are robbing wildlife of much beneficial food, and the Game Commission appeals to all individuals to stop this practice in behalf of our furred and feathered friends. Furthermore, there is a \$25.00 penalty in the forest laws of the Commonwealth for gathering this ornamental shrub from the lands of another without the owner's permission. Each year thousands of these vines are cut and often destroyed by individuals who are thinking only of the decorative value of the bittersweet. It is hoped that this year our citizens will be more thoughtful of wild creatures and leave the shrubs where they will do the most good.

### THREE LEAVE SERVICE

Dr. Charles S. Apgar, Assistant Chief of the Bureau of Education, terminated his services with the Game Commission on October 1, after serving over three years in the various phases of the educational program.

He will take charge of the Morphological Experimental Farm of the Cornell University Medical School. His address will be Lake Mohegan, New York, and he will be glad to hear from his many friends at any time.

"Doc" as he was familiarly called by everyone, will be greatly missed both in the field and in the office. Everyone wishes him the utmost success however, now that he has entered his chosen field. Doctor Apgar and his wife undertook the same studies and are well equipped to carry on scientific work. We hope to hear great things of them as time goes on.

Another well known and well liked employe of the Game Commission terminated his services on September 25th—John A. (Jack) Downes, master draftsman in the Bureau of Refuges and Lands. Mr. Downes will attend the Massachusetts Institute of Technology, where he will undertake a course in architectural engineering. We wish him the best of luck. Jack began his service with the Commission on September 5, 1928.

Norman M. Wood of Coatesville, another official of the Division of Education, retired on October 1st, terminating twenty-one years of loyal and active service in the interests of the Game Commission and the sportsmen.

Mr. Wood began his career as a game protector in 1915 and in 1919 was appointed division supervisor. In 1925, just after its

establishment, he was transferred to the Division of Education as a lecturer and served in that capacity until he retired.

There are very few sportsmen's associations or public schools with which he did not have contact in some way or another during his lengthy service, and their testimonies certify to his untiring efforts in preaching the gospel of conservation among their members.

### FIXED CHARGES ON GAME LANDS

The State Game Commission this year is paying a total of \$24,960.82 to counties and townships, in lieu of taxes, on State Game Lands and Game Propagation Farms. Com-



Henry Schell of the Commission's Division of Education focusing telephoto movie camera on Hawk Mountain, Schuylkill County. At extreme right is Maurice Broun, keeper in charge. People from many states watch the migration of hawks from this point annually.

monwealth-owned property, by provision in the State Constitution, is exempt from the ordinary forms of taxation, but to compensate local governments for the loss of taxes from lands acquired by the Commonwealth, through the Game Commission, a statutory fixed charge per acre has been wisely provided.

For each acre of Game Commission lands in the respective counties the Commission pays 1c to the County Treasurer for county purposes. This year a total of \$4,993.90 is being paid to 54 County Treasurers.

For each acre owned in the respective townships the Commission pays 2c to the Treasurers of the Board of Road Supervisors for road purposes, and a similar amount to the Treasurers of the Board of School Directors for school purposes. Game Commission lands are located in 225 townships. The total amount being paid to the Treasurers of the Board of Road Supervisors is \$9,886.44, and to the Treasurers of the Board of School Directors \$10,080.48.

The discrepancy between the amount paid for road and school purposes is due to the fact that for certain tracts purchased during 1936 the grantors had paid the customary road taxes for this year and, consequently, the Game Commission does not pay the fixed charges on those tracts this particular year.

A table showing the amounts being paid to the respective counties and townships appears on page 27.

### IN MEMORIUM

It is with deepest regret that we report the death of another old veteran of the Department. Eli Richey, retired from service since December 31, 1932, and for 15 years Game Protector of Bedford County, passed away at his home in Everett on October 2nd, just a few months after the death of his wife. "Old Eli," as he was familiarly called by his many friends, joined the field staff of the Commission back in 1917 and served faithfully until his retirement on December 31, 1932.

He will be greatly missed in and around his home town where his constant devotion to duty was a byword among local residents.

### GORDON AND DEIBLER AT WEST VIRGINIA CONCLAVE

Seth Gordon, Secretary of the Game Commission, and O. M. Deibler, Commissioner of Fisheries, attended the third annual convention of the West Virginia Affiliated Sportsmen's Association at Richwood, September 18 and 19, where both were guest speakers. John G. Mock, All-Out-Doors Editor of the Pittsburgh Press, was also an honored Pennsylvania guest.

The West Virginia Association, which was formed in 1932, is comprised of clubs only and has no individual members, or individual dues. The affiliated clubs neither change their names nor lose their identities. They maintain their independence for the purpose for which they were organized, and each one is urged to continue anticipating the needs, fostering and supervising the activities in their own county or community.

The yearly dues are \$10.00 from each member club in the association, which assessment is made to defray actual expenses of the annual state meeting, and incidental expenses incurred by the secretary for stationery and printing, etc. The officers receive no compensation.

Farmers killed 286 deer as a protection to crops during September. Damage was done principally to corn and buckwheat, and took place in 29 counties.



## FIELD NOTES

Refuge Keeper Hugh Baker, Tioga, reports ringnecks are destroying tomatoes in his section.

During the breeding season this year, Refuge Keeper Oudette found the following species nesting in the Pymatuning Swamp: red heads, ruddy ducks and ringneck ducks. These are very unusual findings and possibly may be recorded as the first of their kind in the State.

The editor spent several days on the Pymatuning Waterfowl Refuge during the latter part of September and was surprised to observe seven bald eagles. Everything possible is being done to protect this fast disappearing species.

While traveling in the Hicks Run section of Cameron County recently, Mr. M. Brechbill, ardent sportsman of Leechburg, observed a herd of elk, including two immense bulls with massive racks, and one or two calves. All were leisurely browsing, apparently at peace with each other and the world in general, except the bulls who kept glancing his way. Suddenly the "would-be" masters of the herd charged each other with lowered heads, and the contest for supremacy was under way.

Mr. Brechbill said, "No two gladiators could thrill me as those two beautiful animals did as they clashed and recharged, seemingly in mortal combat. Finally, however, the fight ended. Each apparently had had enough. As a referee I called it a draw."

Refuge Keeper Walter Moyer, of Huntingdon County, recently killed a blacksnake 6 ft., 4 in. long. The reptile had just eaten two full grown gray squirrels.

We are grateful to radio station WLEU, Erie, for advancing the interests of wildlife over their facilities. This station is broadcasting two fifteen minute radio talks each

## NOTICE

DO NOT ATTACH PAPER CLIPS TO PHOTOGRAPHS. THEY SCRATCH THE PRINTS AND WE CANNOT AFFORD TO RETOUCH THEM

week containing news of interest to sportsmen.

Deer are damaging buckwheat and bears are playing havoc with corn around Berwick, Columbia County, and in some sections of Lycoming, Indiana, and Somerset Counties. Local residents of Berwick say there are more deer in that locality now than there have been for several years. Efforts are being made by game officials to live trap some of the bears for release in sections where they not be able to commit any depredations.

Harold Plasterer of the Bureau of Predatory Animals, surprised the administrative staff of the Commission at its usual Monday morning conclave by exhibiting over a pint of chestnuts which he gathered in the mountains about Pine Grove Furnace, Cumberland County.

The Game Commission would like to know just how many hunters in Pennsylvania use the bow and arrow and just how many have bagged game by this method.

A preliminary report submitted by the Department of Revenue indicates that 606,136 resident hunters licenses and 8,461 non-resident hunters licenses were issued from September 1, 1935 to June 1, 1936.

A Federal Migratory Waterfowl Stamp is not necessary to hunt woodcock.

During the month of September 2 wildcats, 141 gray foxes and 373 weasels were submitted for bounty, entailing an expenditure of \$2,967.

## ADVICE TO HUNTERS

When hunting together always extend the courtesy of the woods and fields to your fellow gunners and to the landowner.

When you miss a rabbit and it runs into a rail pile or a hole in a stone wall, unless you have maimed it, leave it alone. It will furnish some sport to the next fellow.

If it is necessary to take fence rails down, it is just as necessary to replace them. And the farmer that sees you do the latter will say to himself: "That hunter can come back here again."

Apples and nuts on private lands do not belong to the hunters unless they have permission to take them. A hunter's coat filled with stolen goods causes much suspicion.

Many farmers will invite you to have a warm meal if you ask permission to hunt.

Game protectors will be in the fields and woods bright and early on the first day to see that gunners do not hunt before the starting hour of 9:00 o'clock.

Play safe by removing the shells from your gun before climbing over a fence. Your own and companions' lives are worth far more than the time it takes to do this.

One lighted match, cigar and cigarette can start a fire that costs thousands of dollars in timber and game.

Shooting into live trees is a violation of the law. When practising, select a range where shooting can be done into a bank free of trees.

Traps should not be set in holes where game is likely to be caught. Traps may not be set until 9:00 o'clock on the morning of the opening day for trapping, Friday, November 6.

Every gunner should observe the law prohibiting hunting within 150 yards of occupied buildings.

Cubby Set for Skunks

Deadfall





## EXPECT GOOD FUR SEASON

Harry VanCleve, former director of the Bureau of Predatory Animals, stopped in the office recently on his way back from New York, where he attended the fur auctions.

He says that all furs sold freely at good prices except badger, which was somewhat neglected, all but the better grades. Some of the large northern wolves sold as high as \$50.00, and a large supply of ordinary wolves moved rapidly at from \$10.50 to \$13.75. Canada lynx sold up to \$50.00. A large supply of wildcats sold freely at \$6.00 and a lot of twenty-two extra large skins brought \$8.90. A large supply of gray foxes sold freely at \$2.50 to \$2.80. The mink moved rapidly at from \$12.50 to \$15.75 and one lot of fine skins brought \$18.50. Otters were all sold at from \$12.00 to \$26.00. Good weasels sold in lots of two to four hundred at \$1.30 to \$1.50 each. Large quantities of northern muskrats were sold at from \$1.50 to \$1.80, while southern muskrat brought from \$.90 to \$1.40.

Mr. VanCleve said he contacted some of the principal fur men along Seventh Avenue, and they are all agreed that the prospects are good for the best fur season they have experienced in several years.

## HAVE A TREASURE HUNT; FIND YOUR LICENSE CERTIFICATE

The New Year is not very far away, yet many hunters are still sending in their 1935 game kill reports. Nothing unusual about this except that the late arrival of the stubs complicates matters in the Harrisburg office in compiling the annual kill.

Here is what happens to the average hunter:

When the hunting season ends he hangs his hunting paraphernalia in the closet or stores it in a trunk with moth balls and forgets to remove anything from the pockets, one of which usually includes the license certificate on which the stub is attached.

A month or six weeks before the next season rolls around, Mr. Hunter again begins thinking about his equipment. Guns are brought from the closets and cleaned and

### Weasel Set



C.C.C. boys under supervision of Foreman Tom Linder cutting stones for dam on game lands No. 54.

oiled; hunting paraphernalia is examined and inspected for moth and the pockets are rifled. The number of odds and ends he finds is amazing. Some of his best linen handkerchiefs, packages of cigarettes and cigars, shells, moss and what have you, are discovered. Last but not least, the license certificate which bears the stub on which the kill of game should be placed, is found. Thinking it is better late than never, he sends it to the Game Commission to be tabulated almost a year after the license is issued.

Hunters might remind themselves before storing their hunting paraphernalia after the 1936 season, that they should have a treasure hunt of their clothes to see what is in them.

If the license certificate is there, fill it in and send it to the Game Commission so that a more accurate record of the kill of game can be made. Such records give the Commission a better idea of the hunting territories which need restocking most. Send in your stubs from the license certificate immediately after the close of each season.

## PRESIDENT REPORTS WILDLIFE PROGRESS

President Roosevelt praised the work of all wildlife conservation agencies in the most glowing terms recently when he addressed the Festival of the Mountain State Forest at Elkins, West Virginia. He pointed out the practical contributions made by C. C. C. Camps and other agencies whose activities are directed to the preservation of wild life.

"No part of our conservation work is more important than the protection of our wildlife," said the President, pointing out how shamefully neglected and exploited it had been in the past.

"So far," the President said, "allotments totaling 14,700,000 have been made from current emergency funds to support the wildlife program—an amount greater than the total of all funds previously appropriated for that specific purpose.

"In addition, I approved an Act of Congress continuing an appropriation of \$6,000,000 of emergency funds for identical purposes, making altogether \$20,700,000 for the

conservation of waterfowl, birds and other valuable forms of American wildlife.

"We outlined and enacted a legislative program to give effect to our policy:

"(1) The Duck Stamp Bill, which has raised about \$700,000 a year for the protection of migratory birds.

"(2) The Coordination Bill requiring active cooperation of each department of the administration and Cabinet officers in the enforcement of game laws.

"(3) The Robinson Bill creating game sanctuaries on all public properties, a big step forward."

In closing the President urged the cooperation of all sportsmen and conservationists throughout the United States to further this movement.

## KILLING WEASELS IS CAT'S HOBBY

"Mugg" is the name of a tomcat owned by W. F. Seal, Mendenhall, Pa., whose hobby is catching and killing weasels. During the last week in July "Mugg" killed six weasels. The owner of the cat declares that he thinks as much of the cat as he does of his hunting dogs.

"'Mugg' is very shy of strangers, and he doesn't roam at night because we keep him in the house," declared the owner of the cat.

## GIVE GAME A SPORTING CHANCE

Hunters are asked not to shoot pheasants, quail, grouse, or rabbits when sitting on the ground or in trees. There is no thrill in "nest" or "roost" shooting, and the practice is generally frowned upon by all true sportsmen.

Hunters are also reminded to carefully "mark down" their game after shooting so they can find it more readily. Too many birds and animals are crippled and left to die, because they are not "marked down" properly or accurately.

Wounded birds, particularly, will seek the most unusual places to avoid capture. Pheasants have been known to crawl half way up the inside of an old rotten stump or secret themselves in the thick grasses along streams. Often drowning in the attempt to outwit their human pursuers.



# FIELD DAY AT TRAINING SCHOOL

PENNSYLVANIA GAME NEWS

NOVEMBER

THE sportsmen of Pennsylvania had a preview of the type of officers who will administer the work of game conservation in the future at the First Annual Field Day of the Game Commission Training School, October 12, 1936.

The purpose of the Field Day was to show what had been accomplished at the School after a period of only three months' training, and the Student Officers acquitted themselves splendidly. They went through their paces like veterans before an enthusiastic audience of sportsmen and prominent conservationists who braved unusually cold fall winds to attend, and who did not hesitate to show their appreciation and approval of the program.

To the Student Officers this event signified the half-way mark of their course of training. Since the inauguration of the School, July 1, they have gone through a period of intensive study, and have emerged an inspiring group of young men, physically fit, and well versed in all matters pertaining to game conservation.

From their very appearance and behavior it could easily be seen how keenly interested the students were in their work. They performed each event with a zest which signified that they enjoyed doing it.

Wilbur M. Cramer, Superintendent of the School, and Robert Reed, Assistant Superintendent, won the respect and admiration of all present for the splendid showing made by the student body and for their own personal snap and dignity in directing the various events.

The program was both spectacular and thrilling from start to finish. The various drills were executed with exact precision, and the pantomimes of law enforcement activities gave those present a very clear conception of just why such schooling is necessary to protect human lives as well as wildlife.

There were also revolver matches, trap shooting, pistol and boxing exhibitions, calisthenics, and other demonstrations which diversified and completed a very successful program. Those who attended the celebration proclaimed it one of the most educational and entertaining displays they had ever witnessed.

Space does not permit our recording the names of all those present, but guest cards indicated that sportsmen from almost every section of the State were well represented. Honored guests included Governor George H. Earle, Dr. Ira N. Gabrielson, Chief of United States Biological Survey, Washington, D. C.; E. Lee LeCompte, State Game Warden of Maryland; Talbot Denmead, U. S. Bureau of Fisheries, Washington, D. C.; M. W. Brackett, Chief Game Protector of New York; and members, and executive staffs, of the Pennsylvania Fish and Game Commissions.

Members of the Fish Commission attending were S. J. Truscott, Harry E. Weber, and Commissioner O. M. Deibler.

Members of the Game Commission attending were Major Nicholas Biddle, President; J. Q. Creveling, Vice President; Col. A. W. Lee, Clearfield, Pa., and R. Lamberton, Franklin, Pa.

Most of the Directors of the Pennsylvania Federation of Sportsmen's Associations were on hand, including that fine old campaigner, "Had" Smith of Wilkes-Barre.

The program was climaxed by a stirring talk by Governor Earle, who had flown from Harrisburg with Major Nicholas Biddle, President of the Game Commission, just to attend this occasion. He spoke briefly on game conservation, renewing his pledge to keep politics from interfering with the management of the State's wildlife program. At the conclusion of his address he greeted each of the Student Officers.

Other speakers were Dr. Ira N. Gabrielson, Major Nicholas Biddle, President and J. Q. Creveling, Vice President of the Board of Game Commissioners respectively and Dr. C. A. Mortimer, Secretary of the Federation of Sportsmen's Associations.

Former members of the Game Commission who attended were Ralph H. Eckenstein, Harrisburg, Pa.; Richard E. Reitz of Brookville, and Howard Stewart of Clearfield. Their presence indicated their continued interest in conservation work.

There are 32 Student Officers at the School at present. These were selected from the 449 who took the competitive examination in June. Five men from each Division who had the highest scores were accepted, providing they passed the rigid physical examination.

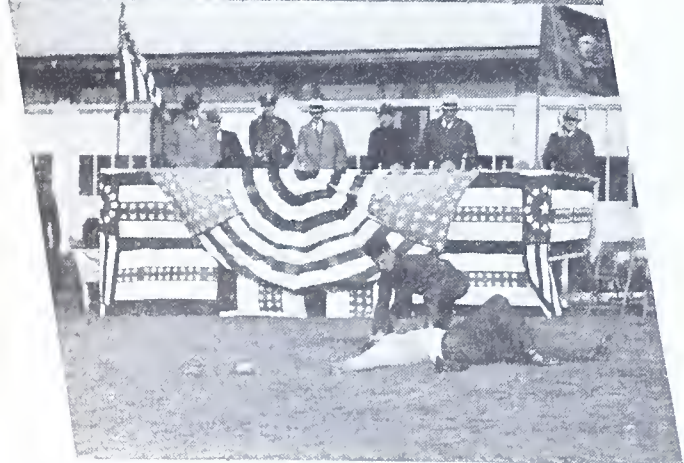
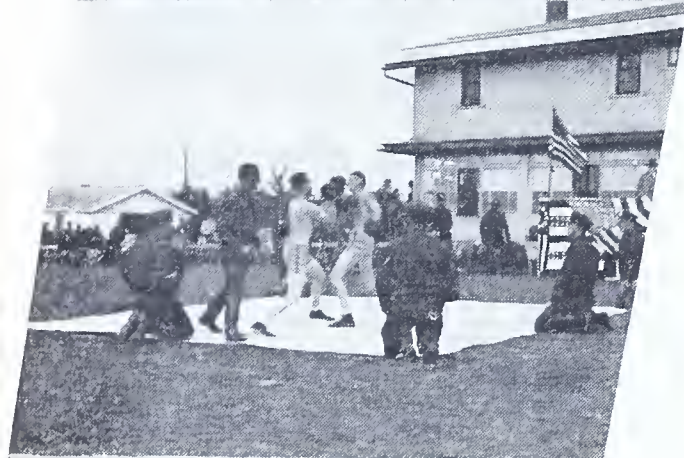
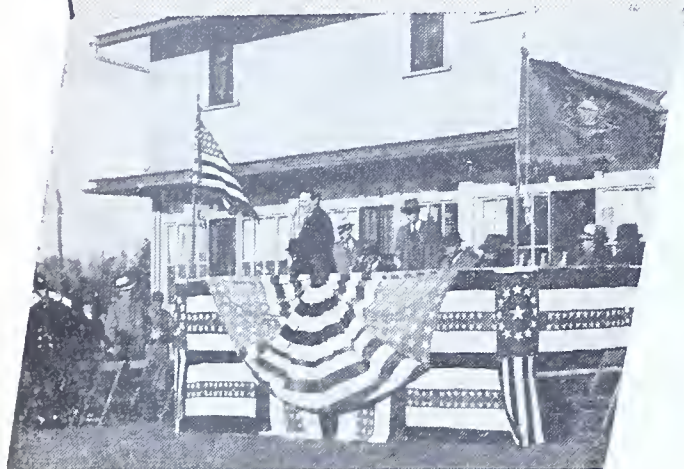
The Training School is under the supervision of the Bureau of Protection, directed by W. C. Shaffer, who laid the ground work for it, and to whom much of the credit goes for the progress it has already made.

Now that they have completed the major part of their classroom instruction, the men will be sent into the field during the hunting season to assist in protection and law enforcement work. When the season closes they will return again to the School for another period of instruction. Graduation will be March 1, 1937.

## Illustrations—Left, top to bottom:

1. Governor Earle addressing spectators and student body.
2. Students demonstrate their marksmanship at the traps.
3. Boxing constitutes an important part of their physical training.
4. How properly to disarm prisoners.
5. Ready for roll call.

Below: Governor Earle shakes hands with each student officer at close of ceremony.





# CAPITAL CITY FIELD TRIALS

By CHARLES FORRER

Over 1500 hunting dog enthusiasts were present at one time or another during the four-day meet of the Capitol City Field Trial Association held at the Indiantown Gap Military Reservation, Lebanon County, Pa., September 27 to 30.

## OPEN AMATEUR DERBY

Nearly 1000 spectators formed the gallery on the first day, which started with the Open Amateur Derby, comprising 28 entries from Pennsylvania, Virginia, Maryland and New York. This event climaxed the second day with Tommy Boy, Pointer, owned by W. H. Watson of Cornwells Heights, Pa., the winner. Second place went to Florendale Spider, English Setter, owned by C. L. Adams, Hamilton, Va., while Rain Beau, owned by V. P. Hawse of Staunton, Va., won third laurels.

## OPEN AMATEUR ALL-AGE

Twenty-nine entries competed in the Amateur All-age Stake, won by Lakeview Farms Doc, pointer, owned by J. H. Miller of Clayton, N. J. Second, Equity, English Setter, owned by V. P. Hawse, Staunton, Va. Third, Hawks Fancy, English Setter, owned by Dietrich and Gambrell, Frederick, Md. Twelve entries were from Pennsylvania, seven from Virginia, four from New Jersey, two from Maryland and one from New York.

## NOVICE ALL-AGE

The Novice All-Age drew only ten entries, nine home state and one New Jersey. Gentleman Jim Day, pointer, owned by I. W. Day, Reading, Pa., won first honors; Juniata Rex, pointer, owned by Ray Pennypacker, Harrisburg, Pa., took second laurels; and Jack of Sunnyslawn, pointer, owned by Charles Forrer, Camp Hill, Pa., was awarded third place.

## SHOOTING DOG

Frank of Sunnyslawn, another splendid Forrer dog, captured this event, which comprised 14 entries, eleven from Pennsylvania, two from New York and one from New Jersey. Hexire Jim, pointer, owned by Dr. E. K. Tingley, Marietta, Pa., was second, and Clarkes Valley Dan, setter, owned by Landis Musselman, Lemoyne, Pa., third.

The trials were acclaimed one of the best and largest in the east. More and more in-

terest is being shown in this type of sport each year, and Seth Gordon, in addressing the exhibitors and their friends said, "I will welcome the day when more hunters hunt with a dog and a gun because then there will be much less waste and more game conservation. At present there are many hunters who cripple their quarry but are unable to find it after it seeks the protection of brush and timber."

## YOUNG CLUB

Starting back in 1930, this Harrisburg, Pa., organization has grown until today it is among the larger clubs of the Eastern Seaboard. In the early days it ran into many difficulties, but by perseverance, and hard work, by the loyal group of local bird-dog enthusiasts, the Fall trial for 1936 was made possible. The trial opened with the remarkable entry of ninety-three dogs to be run, all in the amateur stakes. The club was conceived with one thought in mind—that of improving the breeding of the Setters and Pointers of local dog fanciers.

## OFFICERS ACTIVE

P. L. Reagan, Secretary of the organization, is certainly to be congratulated upon the success he has had since taking charge of this office. Dr. E. K. Tingley, President, has been absent quite a bit during the last year, but his active Vice-President, Herman Garman, has ably filled the President's chair in Dr. Tingley's absence. I am not forgetting the work done by the enthusiastic and active Grounds and Field Trial Committees, for without these committees, no club can be a success for long.

## HISTORIC GROUNDS

That the Capital City Club is destined to become one of the largest clubs in the East is conceded by all Field Trial authorities who have had an opportunity to visit the splendid grounds located at Indiantown Gap Military Reservation, about twenty miles from the Capital City. These grounds consist of over twenty thousand acres of level country, where a good dog looks splendid and a poor one terrible. It was of these grounds that Walter Arnold wrote some time ago, stating he "saw a dream come true," and after visiting practically all of the Field Trial grounds of the Eastern States, I have yet to find one that can compare with the Harrisburg layout, unless it might possibly be the new grounds of the Chemung County Club of New York.

NOTE: Time and space did not permit our listing all entries. We understand these will appear in a forthcoming edition of AMERICAN FIELD.

Right: H. E. Longsdorf, member, N. J. Game Commission, and Pres. English Setter Club of America, with Four Wind Arrows

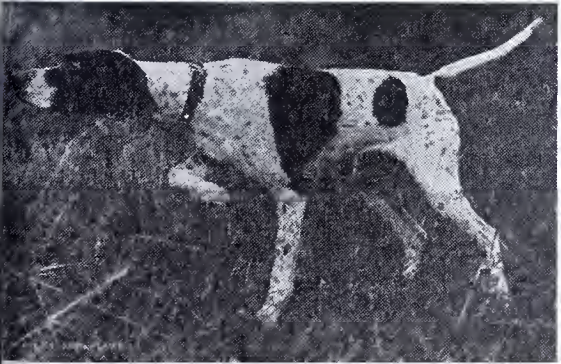
Left: Frank of Sunnyslawn, owned by Charles Forrer, Camp Hill, Pa., winner of the Shooting Dog Stake



W. H. Watson, Cornwells Heights, Pa., with Tommy Boy, winner of the Open Amateur Derby



Below: J. H. Miller, Clayton, N. J., with Lakeview Farms Doc, winner of the Amateur All-Age Stake







# LOST BIRDS

By FRED EVERETT

Sketches by the author.

**"POINT!"**

Your blood runs faster as the bird dog swings around into that thrilling pose. Your companion takes his stand, the bird flushes, there is the roar of the gun—a cloud of feathers—and the bird plumps down.

"Dead bird—fetch!"

You are proud of that shot—a clean hit and kill—or is it? The dog goes to where you marked the bird down but instead of picking it up, starts hunting around eagerly, casting further and further away from the spot. You and your companion search over the place again and again. There are the feathers, but no bird to be found—apparently no trail for the dog to follow.

Has your dog suddenly—after displaying such a keen nose all day—lost his sense of smell? No—it couldn't be that. The bird certainly fell like a stone—it didn't flush again—didn't run or the dog would trail it. Then what? Where? It couldn't just evaporate.

In time you give it up—you hate to but you have to admit defeat—the bird is lost. You feel it is a crime to leave a wounded bird to die and be wasted but there is nothing you can do about it. Where could the blamed thing have gone?

Time and again this experience happens to all of us bird hunters and it is in the hope that you may be able to answer that question at least part of the time that I am discussing lost birds and giving a few experiences of my own and others in which the answer has been found. It may be that you, too, have found the answer once in a while, maybe the same day and recovered your bird; maybe days later when you have accidentally stumbled upon the spoiled remains. If so, I should be glad to hear about your experiences and let others know of them so that we all may better find these lost birds and enjoy both the eating and the satisfaction and relief of knowing that we have not left a brave bird to suffer or to die a lingering death.

With a few exceptions, the reason for losing birds can be traced directly to their nature. Their protective instincts make them do everything possible to prevent the hunter from finding them, dead or alive. Every duck shooter will tell you of badly wounded ones that dive to the bottom and grab with a death grip onto anything that will hold them there even in death, until eaten by fish, turtles or other aquatic foragers, rather than let the hunter claim their bodies. Land birds are just as perverse and go to surprising lengths to lose themselves, even when in their death throes.

Sometimes, however, they become lost through pure accident and it is up to each one of us to search every spot—likely or unlikely, before giving the bird up for lost. The following incident is very common to all who hunt birds in thick cover.

Some years ago I had the good fortune to go woodcock hunting here in Rockland County, N. Y., over a couple of champion setters, in company with Al Knapp, their trainer. We got into a good flight of the timber doodles and were enjoying a real morning of excellent sport. As we started to make our way through some particularly thick cover, both dogs froze on point in the heavy brush.

We couldn't find a suitable place to stand, so Al dropped to his knees and worked in ahead of the dogs.

"There he is," said Al, and at his voice a bunch of leaves rose up through the brush with a startled whistle, followed by the roar of Al's gun as he took a pot shot from his cramped position.

I did not see the bird at all but saw the feathers floating down. It was a clean hit—a remarkable or lucky shot, whichever you call it. Then the hunt began, but no bird could be found. Time after time the dogs were called in and sent through the cover where the bird should have been. At last we gave it up and started on, when, as I pushed through some branches, a lone feather floated downward before me. Calling to Al to wait, I looked up and examined the overhanging limbs carefully. And there was the woodcock—lodged in a crotch in the top of a small birch. A light breeze or my moving the branches had made the feather fall in time to save the bird for us.

That was the first time I had retrieved a bird from a tree top. Since then I have done it often in thick cover and saved myself many birds and many hours of useless search on the ground. There are many other such places for your dead birds to fall, in or on stumps, stone walls, into holes or water, especially pheasants in swamps, and innumerable places where one would not usually expect to find his bird. Often it is faulty marking down; sometimes the bird falls out of sight and cannot be marked down and at other times there is just enough life left for the gamey rascals to move and fool us.

Therefore it behooves us to look everywhere within reasonable range—and even then we may not find the bird. In that case if you have a good dog you can make up your mind that the bird was not killed outright but was able to pull one of its stunts to hide



or get away. The following experiences will explain a few of these stunts.

A number of years ago I took a few days off to hunt quail at Tuckerton, N. J., with my friend Art Gage, a state and federal game warden, who was later killed in line of duty, and his exceptional setter—Grace. We found plenty of birds and enjoyed to the utmost the beautiful manner in which Grace handled both the coveys and the singles. After flushing a covey we would follow into the scrub oak to work the singles.

One of these singles brought us face to face with the age old "Quail Mystery." After the flush, we both shot as the bird cleared the brush tops. It continued on, then of a sudden collapsed. I marked it well and we went over to retrieve it. But it was not to be found. Finally we came together to talk about our next move when a sparkling gleam in the leaves at my feet caught my eye.

Then I saw it. There lay our quail, its bright eye looking steadily at mine, apparently unafraid and feeling secure in its invisibility. I pointed it out to Art, who called Grace in and bade her find-dead bird.

Try as she would, Grace could not find that bird, although she passed her nose over it at least three times, and once hit her foot against it. We were dumbfounded. I reached down and picked up the quail. She made no effort to escape nor did she struggle in any way—just sat in my hand undisturbed. We examined her carefully, tested both wings and legs. She was not hurt. In the end, we placed her on the ground, stepped back and watched.

After a time the bird raised her head, looked at us as though saying, "Thank you," and was off with a whirl of wings—flying strongly. I should not have believed it had it not been my personal experience—especially the fact that Grace had her nose almost on the bird and yet did not smell it.

As soon as I reached home, I hurried over to see my friend Ray Potter, bird authority at the American Museum of Natural History and a real sportsman. I told him our experience.

"Well, Fred," he said, "you have come up against the old mystery which quail hunters have debated for years. It has become an accepted theory that quail have the power to withhold their scent—how, nobody knows, but they do. That's how many that are hit are lost unless marked down perfectly.

"It is not the dog's fault when suddenly it loses a whole bevy of quail when you have seen them drop and know just where they are. I remember a hunt I had with a friend who was trying out a new dog with a whole of a reputation—a world-beater to hear him tell it." Here Ray chuckled as he relit his pipe, I settled down for the story.

"We were hunting along the edge of some bogs when a covey of quail came over a knoll and landed not fifty feet from us out in the bogs. We could almost count the birds as they settled out of sight.

"My friend was all excited, here was a chance to prove his dog. We went in after the birds." Ray's eyes were twinkling as if he were enjoying a good joke.

"What happened?" I asked, anxious to share the humor.

"Nothing—absolutely nothing!" Ray laughed—"That's what made my friend so wild. His dog could not find a bird—he never even made game. My friend was so mad that he went thrashing

through the bogs, saying he'd kick 'em out himself. But he couldn't stir a feather. As far as he was concerned, a whole bevy had been lost.

"I knew what was happening and advised him to sit down and wait until the birds moved, then the dog could find them. But he gave me a scornful laugh, said I was crazy—either the birds had gone or the dog was no good. I couldn't convince him, he wouldn't believe the quail could withhold their scent.

"Finally the dog came over beside him and made game. With a snort of disgust he pushed the dog aside with his foot, saying, 'Git out o' here, you durn fool—there's no bird there—see that!' and he gave the hunk of bog grass a husky kick.

"Whir-r-r! Whir-r-r! Out went two quail. He was so flabbergasted that he never raised his gun while I was laughing too hard to do anything else.

"There are only two things to do when quail withhold their scent—either sit down and wait until they move, if they are scarce, or if plentiful, give them credit for being smart and be a sport—go hunt others.

"Yes, sir—it's a great mystery how they can do it. Don't blame your dog—no nose could find them at such a time."

Later I talked it over with "Pop" Kline, an old-timer at bird hunting—a wiry little German with a blunt finger that always pokes you to emphasize each remark.

"You know how dat happen?" he asked, his finger putting a dimple in my biceps.

"No," I confessed, "Do you?"

"Ya—shure—I seen it offen." My ribs receive a jab. "Dey puts der heads frum der vings unter und holts der breadth. See!" He sticks a hand under his arm to represent a quail hiding its head under its wing. For the moment I am safe from that finger. Then out it comes and taps me on the wishbone.

"Ven dey holts der breadth, dey no schmell—see!"

"I refused to admit he had caught me on that one, and pressed my question.

"But this bird was not hiding its head, I was looking it in the eye as Grace walked over it."

"You know vat I du?" he asked—closing one eye as he cocked his head sideways, looking wise as the finger found another one of my ribs.



Try as she would, Grace could not find that bird although she passed her nose over it at least three times.



"No—what?"

"Vell—I git me a new dog!" The finger jabbed my chest with each word. He knew there was none better than Grace, and went on to tell me how he had known quail to hide in stone walls, holes in the ground, in logs and any other place they could find. He mentioned in particular one covey that landed near a stone wall and disappeared.

"Yu know vat I du?" he said, "I sit me down mit der dog unt pipe unt wait. Den I vissels like dat." And Pop gave an excellent imitation of the short "come-together" call of the quail.

"Yu bet me dey cum frum der stone vall out pretty quick unt I git me my birds, py golly—see!" But I side-stepped the finger.

Another old market hunter and crack shot, one who in the days of live pigeon tournaments represented the gun makers under the name of Arnold, but whose right name was Capt. Nash, the only bird hunter I know who could consistently kill partridge by firing at their rising "whir-r" without seeing them, told me a new one for both quail and woodcock. He had experiences in which they would bury themselves alive when wounded and it was only by luck that he found it out.

It usually happens where there are foot prints, such as made by cows and other animals or ruts or other such holes in soft ground. They dive into these holes and cause the sides to cave in over them, the same as they would hide under stumps, roots or anything and cover themselves with leaves, grass or whatever is available.

Nearly every grouse hunter has had a wounded bird do this, even had them crawl into rabbit or woodchuck holes, stumps or hollows in trees, and defy you to find them.

I remember one day, before I owned a dog, of hunting my favorite cover up near Binghamton, N. Y., at my grand dad's, where grouse were so thick that I seldom came home without my limit. I had knocked down a wise old cock that flushed from a tree behind me after I had passed. It was a lucky shot—one of those made automatically without bringing the gun to the shoulder.

The bird fell heavily and I walked through the woods slowly—expecting to pick him up without any trouble. But he wasn't there nor could I find him. I spent all of half an hour looking and finally sat down on a stump to think it over.

I heard a faint scratching in under me, then a dying flutter in the leaves. Reaching way down inside the stump and digging in the leaves at the bottom, I found my bird—dead. If it hadn't been for his death-struggle I should never have located him—nor would a dog—had I had one.

A similar experience happened to a friend of mine while pheasant shooting. Of all the birds lost, I believe the pheasant leads. They have an uncanny way of dissolving into nothing, even when apparently shot to pieces by two or three hunters firing at the same time. In this incident, two fellows each hit the old ringneck hard. He crumpled up and fell like a bag of sand into a swampy spot, not over thirty yards away. Yet he had completely disappeared when they and their two fine dogs reached the spot.

They had despaired of finding the crafty old cock when my friend noticed one bog seemed to move. He hurried over but found nothing. Again the bog moved and this time he dug down in under it—and there was the pheasant giving his last kicks—dirty, soaked

and drowned. It had dived down into the swampy water and dug in under the bog—certain death to itself but a chance to escape the hunter—he at least, would not get it.

A similar experience happened to me last season while hunting at Mt. Upton, N. Y., on the farm of a friend who reserves the opening days for our party and himself. Little Black Joe was at his best, which means about perfect, and we were bagging our full quota of rabbits and pheasants.

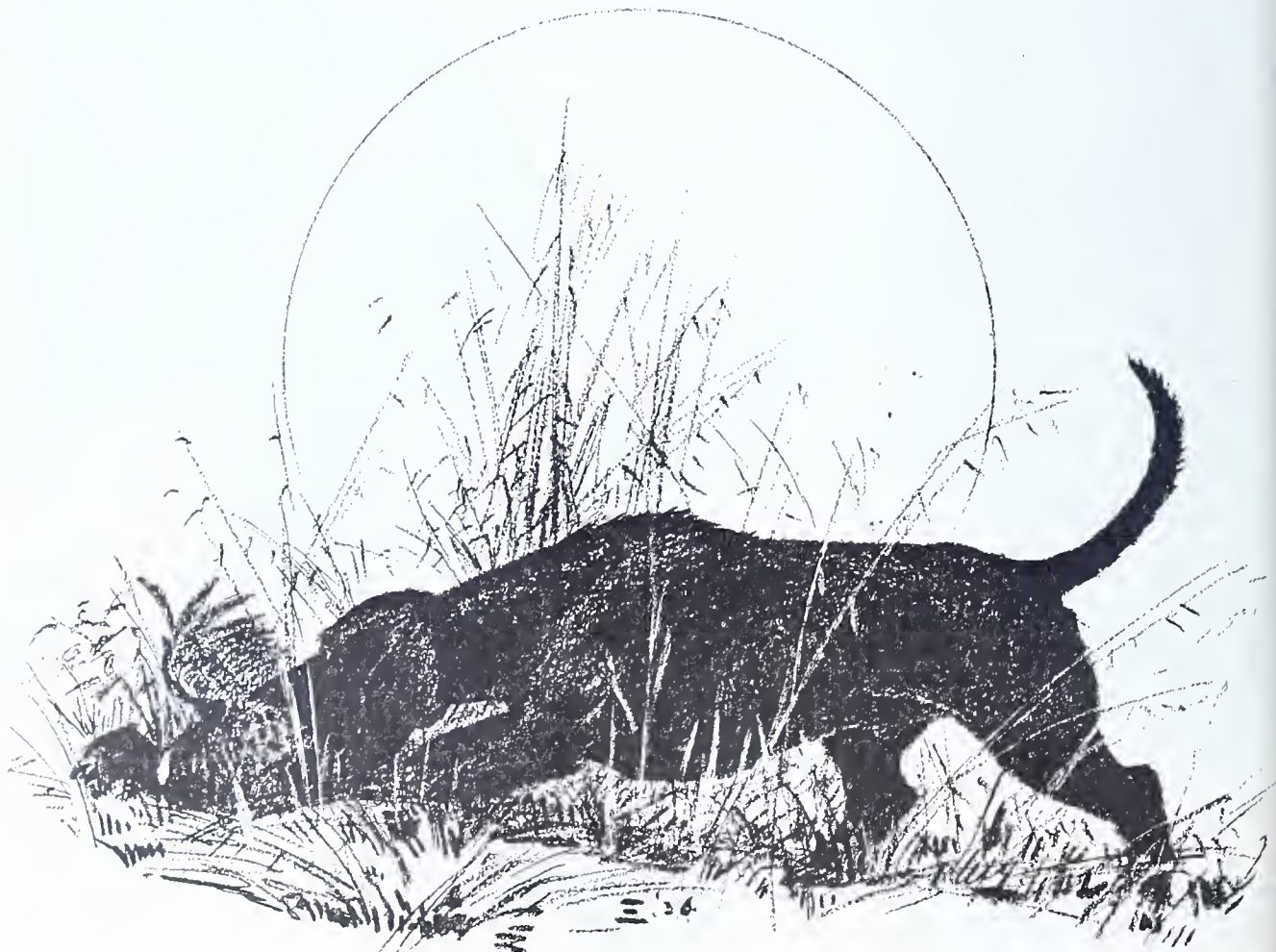
But one pheasant we did not bag, although we finally discovered its hiding place. The heathen rascal landed in a wooded swamp, falling completely "folded up." We found where he hit the ground, plenty of feathers—but no bird. Little Black Joe kept returning to an old stump whose roots were embedded in swamp water and muck. In the end we decided the pheasant was in that stump but down in under the water out of reach. We fished out enough feathers to prove he was there but it would have taken dynamite to get to him. He had buried himself alive in a watery grave, out of the reach of his enemies.

Another stunt these birds have is to set their wings, even in death, and glide just off the ground, far beyond the spot we last see them. Thus we search many yards from their actual landing place and it's no wonder we never find them. Sometimes our dog will find them later, as happened to me two years ago. A beautiful cock flushed with a tree between us. As he rose, I took a chance shot thru the tree. Brother Ray called that I had hit the bird and we went to where he had marked it down in the woods bordering the swamp. Three times over the whole section failed to reveal the bird and we gave it up.

A couple of hours later, on our return, I passed along the outer edge of the woods with Little Black Joe working the brushy fence line across the field. Of a sudden I saw him pounce and then start toward me with a cock pheasant. It was still warm and beyond question the bird I had hit earlier in the day, because we were the only hunters on that farm. Yet the bird was fully two hundred yards from where it was marked down. It couldn't have run that distance or Joe would have trailed it. It had glided just off the ground instead of landing, at least far enough to fool us all. As grouse hunters know, this is a favorite stunt of that gamest of all birds.

I know one party that never goes pheasant hunting without a pick and shovel. When I first learned of this unusual set of weapons, I asked the reason. He gave a good one—he had lost two ringnecks in about the same spot—near a bank with a woodchuck

(Continued on page 26)



Suddenly I saw Little Black Joe pounce and then start toward me with a cock pheasant.



# PENNSYLVANIA STATE GAME LANDS AND REFUGES

**T**HE Game Commission has purchased and paid for 516,615 acres of good game territory, designated by law as State Game Lands, and now has an additional 50,000 acres or more under contract for purchase. Lands already acquired are located in 52 of the 67 counties of the State, and represent an outlay of more than **two million dollars**, which includes the cost of surveying and title abstracting. Primary State Game Refuges have been established on all but very few blocks of Game Lands.

## GAME REFUGES

Game refuges are said to be a one hundred per cent insurance of a continued game supply. At the end of a hunting season there is always seed stock left to product a supply of game for the following year.

In Pennsylvania there are two types of game refuges, i. e.,

**Primaries**, which are those maintained on publicly-owned lands, i. e., State Game Lands, State Forests, National Forests, etc.

**Auxiliaries**, those placed on privately-owned lands for which the hunting rights are leased to the Game Commission for ten years or more by written agreement.

The first primary refuge was established on State Forest Lands in Clinton County in 1905. Primaries have now reached a total of 174, aggregating 121,216 acres, of which 95 are on State Game Lands and total 55,785 acres.

The first auxiliary refuge was established in 1918 in Clarion County. Thirty-eight auxiliaries, totaling 12,909 acres, are now maintained.

The first Cooperative Farm Game Refuge Project, created as an auxiliary, was established in 1936. It comprises ten farms, totaling 1,507 acres, and includes twelve refuge subdivisions totaling 200 acres. These cooperative farm game refuges are more or less of an experiment, and at this time may be established only in the counties of Chester, Montgomery, Delaware and Bucks in the southeast corner of the State and Butler, Beaver, Allegheny and Washington in the southwest corner of the State.

## ENVIRONMENTAL IMPROVEMENT

During the past year or so special efforts have been put forth to develop better food and cover conditions for wildlife. Development activities include the following:

1. Planting cereals on strips or patches within State Game Lands, or refuges on other publicly-owned lands,

especially in wild turkey territory and where farm game species are found. During 1936 cereals were planted on approximately 340 acres in 270 different plots.

2. On certain tracts of game lands release cuttings are being conducted, which call for the removal of competitive growth from around clumps or patches of game food producing shrubs and vines.

3. Thinnings are also conducted to provide a good supply of sprout growth to furnish browse for deer, as well as to improve cover for grouse and other small game.

4. Advantage is being taken of relief organizations, such as Civilian Conservation Corps, Works Progress Administration and The National Youth Administration, to make other developments on State Game Lands, including road repairs to make the lands more accessible for protection and management, construction of trails useful in forest fire protection and at the same time beneficial in providing wildlife



Game Refuges Furnish Excellent Protection to Wild Turkeys

with desirable openings in the woods, the building of game feeding shelters under which to place feed during the winter time, and the cleaning out and walling up of springs.

## ADMINISTRATION AND FINANCING

Administration of the State's system of game refuges and public hunting grounds is handled by the Bureau of Refuges and Lands, and is divided into two principal lines of endeavor, i. e.,

1. Securing land by purchase, or their use by lease.
2. Establishment and maintenance of game refuges, with their accompanying public hunting grounds.

This work is financed from a fund made up of 75c from each resident hunting license, which amounts to almost \$400,000 a year. Covering a period of six years, beginning

June 1, 1930, this special fund within the Game Fund was expended as follows:

1. Permanent Investment, including the cost of lands purchased, etc. ....\$1,569,911.18, or 65.5% of the total
2. Maintenance of primary refuges and State Game Lands \$ 615,235.57, or 25.7% of the total
3. Maintenance of the auxiliary game refuge system .....\$ 19,624.66, or 8/10% of the total
4. Administration of the Bureau of Refuges and Lands.... \$ 190,933.80, or 8% of the total

## MANAGEMENT

Field work in connection with the management of State Game Lands and Game Refuges is handled by Game Refuge Keepers, with the cooperation of District Game Protectors, all of whom are under the supervision of seven Division Supervisors.

There is now a total of 102 blocks of State Game Lands and 21 Game Refuges maintained throughout the State.

It is impossible to employ a keeper for each land or refuge unit. However, it is necessary that each unit be given regular attention in order that the development and improvement of all land and refuge units will be thoroughly and systematically carried on. In order to accomplish this the Board, several months ago, approved a plan of grouping together all game land

and refuge units within a specified territory and placing a Refuge Keeper in charge of each group for protection, development, and general management.

There has now been set up 44 groups. As more Refuge and Game Lands units are added additional groups will be needed and some rearrangement of the present groups will of necessity be made.

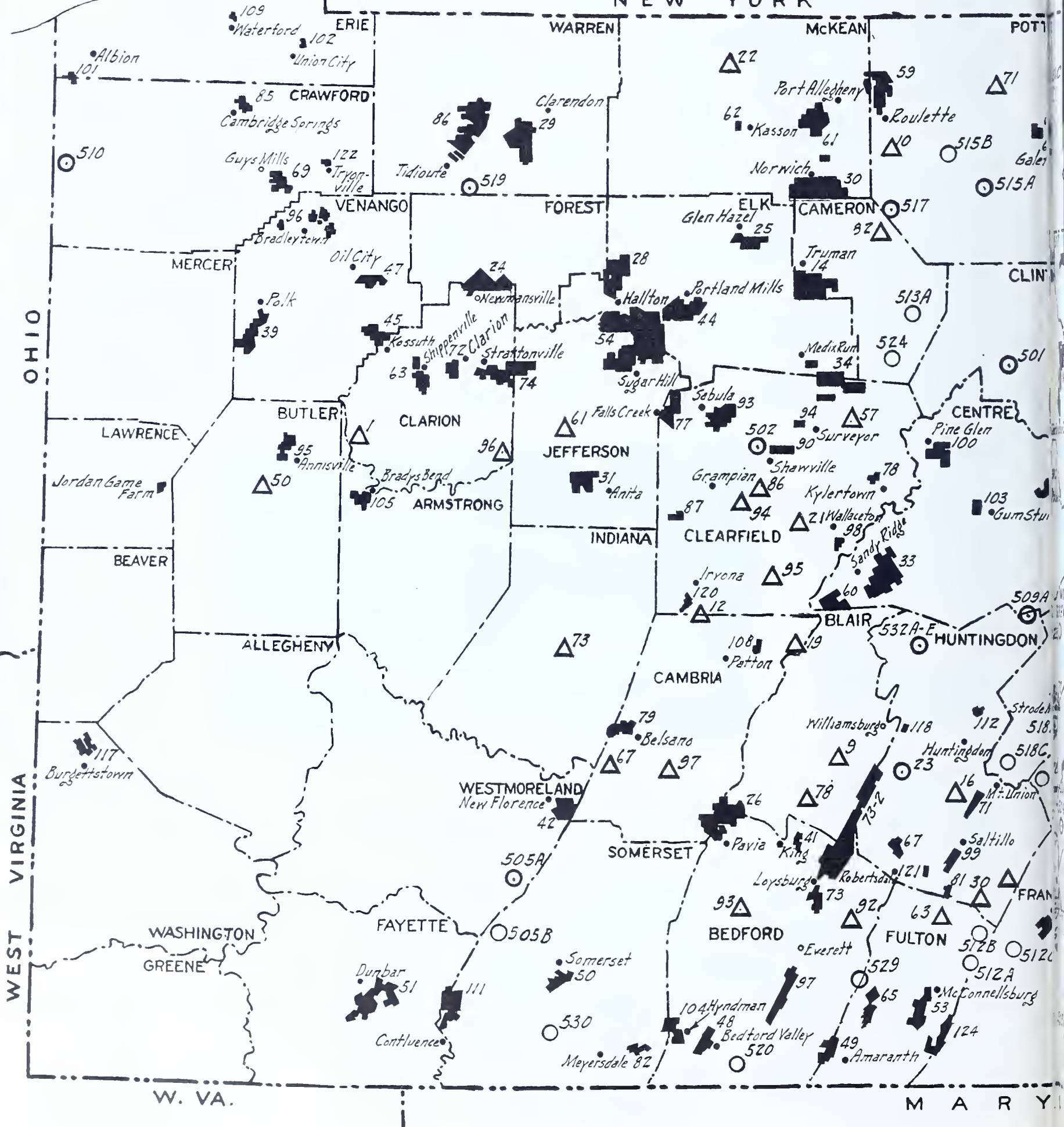
Look before you shoot during the 1936 hunting season. You will not shoot a person in mistake for game if you look first and pull the trigger afterwards.

For transporting quail contrary to the Lacey Act in Alabama, the courts of that state sentenced two men to ninety days in prison. The men had sent upwards of 300 birds from Mississippi to North Carolina.



LAKE ERIE

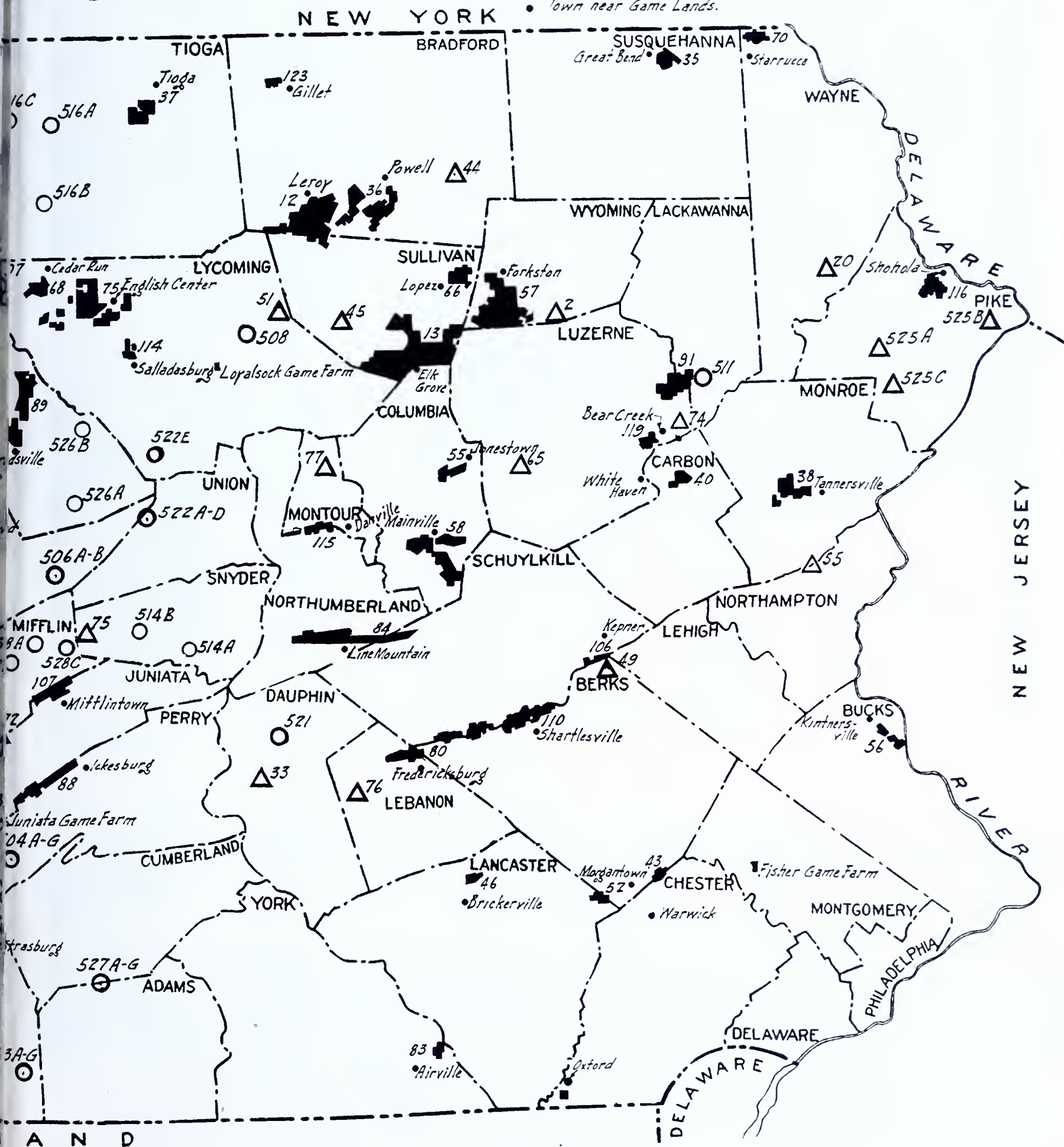
NEW YORK





## LEGEND

- State Game Lands, Primary Game Refuges are maintained within most of these
- Primary State Game Refuges, on publicly owned lands other than State Game Lands.
- △ Auxiliary State Game Refuges, on privately owned lands for which the Game Commission has leased the hunting rights.
- Cooperative Farm Game Refuge Project
- Town near Game Lands.





# STATE GAME LANDS—LOCATION AND ACREAGE

Serial Number	Counties	Acreage Purchased	Acreage in Refuges	Nearest Accessible Town	State Highway from which Accessible
12	Bradford	21,728	2,108	Leroy	Route 414
13	Sullivan	35,542	3,335	Benton	115
14	Cameron	11,888	2,074	Truman	120
24	Forest-Clarion	8,300	1,560	Newmansville	66
25	Elk	6,289	2,098	Glenhazel	255*
26	Bedford-Blair-Cambria	9,110	1,933	Pavla	869
28	Elk-Forest	9,143	2,622	Hallton	219*
29	Warren	8,719	2,369	Clarendon	6
30	McKean	11,572	2,177	Norwich	46
31	Jefferson	3,901	541	Anita	310
33	Centre	11,910	2,996	Sandy Ridge	322
34	Clearfield-Elk	8,800	2,068	Medix Run	555
35	Susquebanna	6,744	1,550	Great Bend	692
36	Bradford	12,118	445	Powell	414
37	Tioga	4,263	334	Tioga	111
38	Monroe	4,879	—	Tannersville	611
39	Venango	7,093	1,008	Polk	62
40	Carbon	1,949	311	White Haven	940
41	Bedford	1,568	405	King	220
42	Westmoreland	4,726	765	New Florence	56
43	Chester-Berks	1,123	200	Warwick	23
44	Elk-Jefferson	24,074	1,570	Portland Mills	949
45	Venango-Clarion	3,072	289	Kossuth	322
46	Lancaster	1,760	210	Brickerville	5
47	Venango	2,060	375	Oil City	62
48	Bedford	4,080	391	Bedford Valley	220
49	Bedford-Fulton	3,314	495	Amaranth	126
50	Somerset	3,164	398	Somerset	219
51	Fayette	7,116	1,044	Dunbar	119
52	Lancaster-Berks	1,425	195	Morgantown	23
53	Fulton	4,353	407	McConnellsburg	30
54	Jefferson-Elk	20,507	895	Sugar Hill	28
55	Columbia	1,800	261	Jonestown	339
56	Bucks	1,390	447	Kintnersville	611
57	Wyoming	24,814	1,367	Forkston	87
58	Columbia	9,166	814	Mainville	342
59	Potter-McKean	6,656	841	Roulette	6
60	Centre	4,028	—	Sandy Ridge	322
61	McKean	8,142	548	Port Allegany	6
62	McKean	521	—	Kasson	6
63	Clarion	2,770	429	Shippenville	322
64	Potter	5,916	1,008	Galeton	6
65	Fulton	3,035	625	Amaranth	126
66	Sullivan	3,293	—	Lopez	564
67	Huntingdon	1,178	185	Robertsdale	913
68	Lycoming	3,006	387	Cedar Run	893
69	Crawford	2,581	472	Guys Mills	27*
70	Wayne	2,279	228	Starrucca	570
71	Huntingdon	2,011	—	Mt. Union	22
72	Clarion	2,019	510	Clarion	322
73	Bedford	14,977	2,018	Loysburg	426
74	Clarion-Jefferson	6,043	—	Strattonville	322

Serial Number	Counties	Acreage Purchased	Acreages in Refuges	Nearest Accessible Town	State Highway from which Accessible
75	Lycoming	18,065	1,362	English Center	84
76	Franklin	2,376	471	Upper Strasburg	633
77	Clearfield	3,038	134	Falls Creek	219
78	Clearfield	721	582	Kylertown	53
79	Cambria	2,059	300	Belsano	422
80	Lebanon-Berks	5,070	315	Fredericksburg	22
81	Huntingdon	2,054	298	Burnt Cabins	522
82	Somerset	1,284	243	Meyersdale	219
83	York	761	—	Airville	74
84	Northumberland-Sebucykill	4,685	499	Line Mountain	225*
85	Crawford	872	141	Cambridge Springs	19
86	Warren	11,347	—	Tidioute	62
87	Clearfield	1,124	248	Grampian	219
88	Perry	4,002	241	Ickesburg	74
89	Clinton	9,546	—	Farrandsville	120*
90	Clearfield	2,339	—	Shawville	970
91	Lackawanna-Luzerne	8,256	367	Bear Creek	115
92	Centre	2,277	151	Howard	64
93	Clearfield	4,717	800	Sabula	555
94	Clearfield	1,008	—	Surveyor	970
95	Butler	1,043	143	Annsville	38
96	Venango	3,280	—	Bradleytown	427
97	Bedford	2,170	683	Everett	30
98	Clearfield	1,180	—	Wallacetown	322
99	Huntingdon	1,888	380	Saltillo	376
100	Centre	3,311	295	Pine Glen	879
101	Erie-Crawford	920	—	Albion	18
102	Erie	278	—	Union City	6
103	Centre	1,031	—	Gum Stump	53
104	Bedford-Somerset	3,034	—	Hyndman	96
105	Armstrong	1,303	150	Brady's Bend	68
106	Berks-Sebucykill	1,706	—	Kepner	29*
107	Juniata-Mifflin	3,614	530	Mifflintown	22
108	Cambria	1,674	—	Patton	36
109	Erie	951	—	Waterford	6
110	Berks-Sebucykill	5,924	—	Sbartlesville	22
111	Fayette-Somerset	5,826	—	Confluence	53
112	Huntingdon	1,027	—	Huntingdon	22
113	Mifflin	534	54	Strodes Mills	22
114	Lycoming	2,311	—	Salladasburg	84
115	Montour-Northumberland	1,134	—	Danville	11
116	Pike	1,678	—	Shohola	137
117	Washington	2,310	—	Burgettstown	18
118	Huntingdon	195	—	Williamsburg	203
119	Luzerne	2,430	—	Bear Creek	115
120	Clearfield	1,000	—	Irvona	53
121	Huntingdon	444	—	Robertsake	913
122	Crawford	797	—	Tryonville	8*
123	Bradford	721	94	Gillet	14
124	Franklin-Fulton	5,385	—	McConnellsburg	30
Totals		516,615	55,785		

\*Off This Route



Migratory wild waterfowl receive protection in the State Game Refuge on Pymatuning Reservoir, near Linesville, in Crawford County. The refuge contains 2500 acres of water and 1170 acres of land and marsh.



# FOOD DEVELOPMENT

## ON STATE GAME LANDS

by James H. Morton



Kaffir corn furnishes excellent food for game birds.

**R**EALIZING that a bounteous supply of natural food is one of the first requirements of game, the Board of Game Commissioners early in the Spring of 1936 authorized development of their game lands for the purpose of providing additional food.

Through the splendid cooperation of field officers and interested sportsmen, many plots were planted to grains and legumes to increase the supply of fall and winter food. A total of approximately 340 acres in 270 plots were planted during the spring, summer and fall of 1936. The materials planted consisted of buckwheat, corn, millet, kaffir corn, soy beans, broom corn as well as other materials, including a number of plots sowed to the Michigan Wildlife Food Patch Mixture which has proven valuable in Michigan. All plantings were made in relatively small plots

near good cover and for the most part have been very successful in materially increasing the game food supply.

During September several experimental areas were planted to *Poa bulbosa* or winter blue grass which has been successfully developed in the Northwest.

The outstanding characteristics are its ability to produce an abundance of bulblets on the heads, as well as a dense mat of bulbs just beneath the surface of the soil. It, therefore, forms a perpetual sod which never has to be reseeded or renewed once established.

This grass also reverses the normal order of growth as it is entirely dormant during the summer, and no amount of moisture will cause it to grow until fall. Soon after the fall rains come the plants revive and send up dark green shoots from three to six inches

high. It remains green throughout late fall, winter and spring. Naturally, where there are severe temperatures the growth of the grass is checked, but apparently it suffers no permanent injury from zero or sub-zero weather.

*Poa bulbosa* appears to have splendid possibilities for Pennsylvania wildlife if it will withstand our climate. In Oregon, where the grass grows, experiments have determined the fact that game birds relish the grass and eat it readily. Deer are also fond of it.

Another program which has been started on several additional tracts of land is the development of food plots by making release cuttings in the vicinity of grapevines, thorn apples, elderberries, blackberries, dogwood, bittersweet vines, sumac and other food producing plants. These cuttings require the re-

(Continued on page 23)





# FOX TRAPPING

By HARRY VAN CLEVE

**T**HE fox trapping season is here again and no doubt many trappers have a number of fine skins already hung up in the drying shed. While there are many expert fox trappers in Pennsylvania, my experience leads me to believe that a great majority of them are entirely too careless about boiling their traps and in handling them with their bare hands.

I returned recently from a trip through the Adirondack Mountains in Northern New York State, where I contacted and spent considerable time with some really expert fox trappers. These men make a business of catching red foxes alive and unharmed, and selling them to Fox Hunting Clubs in New England and on Long Island, New York. They use a No. 1½ Trap, the jaws of which have rubber inserted, or are wrapped with felt and adhesive tape.

The traps are boiled two or three hours in a solution made of common willow twigs and balsam boughs. They do not have the walnut trees there but get good results with the willow and the balsam. These men actually do not touch the traps with their hands from the time they are boiled until they are set, and each time it is necessary to touch the traps, they are taken in and boiled.

They use a tool they call a fox hook which is so designed that it is possible to manipulate the setting of the trap entirely with the hook after the springs have been depressed with the feet. This live fox trapping is done between September 15 and October 15. They use only ten or fifteen traps at a time, and tend them each morning at daylight. They always have freshly boiled traps with them. If one of these men would set ten traps and not catch two or three foxes the first night he would think something was seriously wrong.

On several occasions I asked the question, "Are not some of these precautions you take wholly unnecessary?" The answer always was, "We are successful with this method and until we find something better we will use it." These men use a scent to attract the fox, and I only wish I could give you the formula, but it is a carefully guarded secret.



Over 40,000 Pennsylvania trappers contribute to the fur markets annually. Placing a water set for foxes.

The soil in this country is of a fine, sandy nature and all traps are concealed in the sand. They use the hook and dig a hole at the bottom of a sandy bank along one of the many old railroad grades, old abandoned wood roads or at the base of an ant hill and make it appear as though done by a skunk or other animal. The trap is then carefully concealed in the material excavated, a few drops of the scent are placed at the top of the hole, the trap is securely staked, and all signs of their presence are removed by brushing out all tracks; even the stake used to fasten the trap is not touched with the hands.

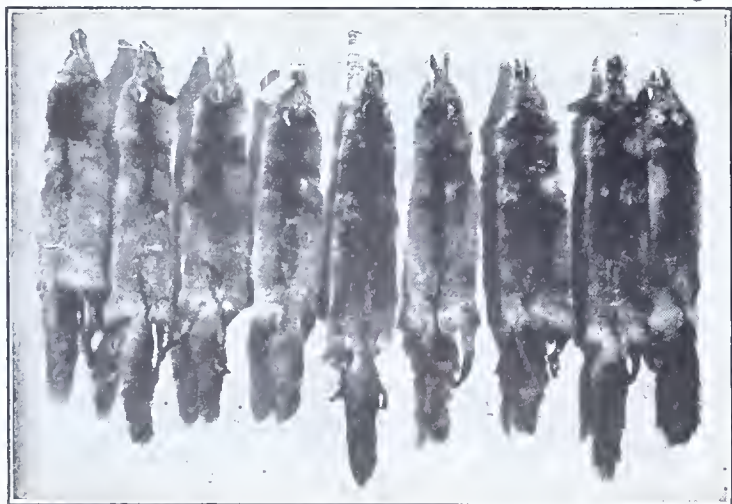
The average fox trapper will think that most of these precautions are silly, but believe me I have missed catching many a fine red fox by neglecting to observe some of these rules.

There is now on the market ordinary canvas gloves which have been dipped in hot rubber. They are inexpensive and wear quite well. Two or three pairs will last through an entire season if used only for handling fox traps, and their use is not necessary for other Pennsylvania mammals.

I have made a careful check on the fur market during the past six months, and all indications point to the best fur season we have experienced in several years. While it is early to predict prices, even the red fox will be worth money this winter.

To all fox trappers who have not been as successful as they think they should have been, I would suggest that they resolve to secure proper traps, rubber gloves, rubber soled shoes, and to boil their traps thoroughly in butternut and soft maple bark or willow twigs and hemlock boughs, and not to touch the trap, chain, drag or anything else they are leaving at the set with their bare hands.

If you use an automobile, when you leave the car, wipe your feet thoroughly in the grass or other vegetation before going to the place where you make a set. When leaving the set remove all signs of your presence, even to the straightening up of the grass where you have stood, and see if you don't have better luck.





# PLANTING NUT AND FRUIT TREES

*by John M. Philips*

Former President Board of Game Commissioners of Pennsylvania

**W**HEN Columbus discovered America, the white race fell heir to the finest country in the world, a rich land covered with many magnificent forests, a land teeming with wild life, the Paradise of the Indian.

In the work of policing, protecting, and preserving these forests which stood here for countless ages, birds and beasts served each in his sphere, performing a useful work for which the Great Spirit created him.

In search for grubs, ants and other insects, bears, the white-wings of the forests, tore to pieces rotten logs and uprooted the tree stumps to make room for new trees, scattering the fragments on the forest floor, where they disintegrated quickly and became fertilizer. The buffalo, elk, deer, rabbits and other grazing and browsing animals destroyed weeds and pruned the trees, throwing the growth to the tops, making timber. Turkeys, grouse and other birds destroyed ground insects. The woodpecker family policed the trunks and large branches of the trees while the warblers and other species of small birds cleansed and protected the small limbs and foliage. The squirrels planted nuts and the birds distributed seeds. The industrious beavers built dams which conserved the water and created fertile meadows. The predators prevented undue increase in wild life by destroying the weak and sick while the scavengers removed the dead and prevented infection and disease.

To the birds and mammals we owe our forests.

The white man, by the use of the axe, fire, plow, sawmill, and gun, together with the drainage and pollution of our waters, the importation of noxious fish, birds, insects, and blights and the commercialization of forests and wild life has almost destroyed the Indian Paradise.

Today, our conservationists are bewailing the destruction of our flora and fauna and are making strenuous efforts to replace both our forests and wildlife.

The first trees to be cut to clear farms and later to be commercialized were the walnut, butternut, hickory, oak and chestnut, all bearing mast. The wild mulberry, wild cherry, gum, and many other valuable fruit and mast bearing trees followed and as a result, today there is very little food for wildlife in our remaining forests.

Our first settlers used walnut, our finest and most valuable North American hard wood because it is easily split and worked, for fence rails, houses and furniture, and other common uses. Ever since guns have been made in America they have been stocked with choice Walnut, and during our many wars millions of our finest trees have been sacrificed for this purpose. Prior to the World War, Germany purchased our finest Walnut, presumably

for furniture and veneer, but most of it was used for gun stocks and airplane propeller blades.

When we entered the war, we used the best of the remaining timber for the same purpose, so that now these valuable trees are almost extinct in many sections.

Our hickory trees have been used for axe and pick handles, wheel spokes and other purposes, where a strong tough wood is required, so that few of them are left. The blight which destroyed our chestnut trees was a calamity, not only in the loss of valuable wood but because our bear, deer, turkeys, grouse and squirrels fed on the nuts during the fall, becoming fat and strong, enabling them to endure severe winters. The beechnut now takes the place of the chestnut, but it is a poor substitute.

Our forestry Departments are planting almost exclusively pines, hemlocks, spruces and other soft woods for future lumber and have neglected our more valuable hardwood nut and other mast bearing trees.

It was in 1905 that the Pennsylvania Game Commission first realized the scarcity of natural food for wildlife and initiated a program of mast and fruit tree planting.

Because I had tried vainly for years to interest the sportsmen of the State in this far sighted project, this program was put under my direction. Failing to arouse in the older generation sufficient real interest in replanting the State's forests for the benefit of wildlife, I turned to the school children, and later, when they were organized, to the Boy Scouts. As an incentive, I distributed to them many thousands of Russian mulberry and sweet cherry trees, with the understanding that one half of the fruit produced was to be dedicated to the birds.

Later I also enlisted our more than 100 game protectors. These men planted hundreds of thousands of fruit, nut and other mast bearing trees, and shrubs and vines.

To the man who planted the most I awarded a 28 gauge double barreled shot gun.

This planting has been of great value, consequently we have had no trouble with our wildlife traveling out of the state in search of food, as was the case in 1933 in the New England States where hordes of squirrels migrated westward into New York and Pennsylvania.

During the World War our Boy Scouts were asked by the Federal Government to find and report all walnut trees suitable for gun stocks and airplane blades. To replace trees destroyed for this purpose Scouts in Allegheny County under my direction immediately started planting walnuts.

(Continued on page 23)



*Courtesy Dept. Forests and Waters*

**Black Walnut Plantation, Mont Alto, Pa.**



# SCATTER LOADS

## NEW LITERATURE

The State of Tennessee has just issued a conservation text book for the public schools. It is entitled "Conservation of Wildlife and Forests in Tennessee." The authors are Harmon C. Headden, Superintendent of Schools, Milan, Tenn., and Damon Headden, until recently State Director of Game and Fish Conservation. The book, which is beautifully bound in red leather, contains 241 pages of splendid text, is profusely illustrated, and costs only fifty-nine cents. It is published by Southern Publishers, Inc., Kingsport, Tenn.

"The Mammals and Life Zones of Oregon," a 416-page illustrated report by Vernon Bailey, formerly senior biologist in the Bureau's Division of Wildlife Research. The new book is No. 55 in the Bureau's technical series entitled "North American Fauna," and is now on sale at 75 cents a copy by the Superintendent of Documents, Washington, D. C.

"Hand List of the Amphibians and Reptiles of Pennsylvania," by M. Graham Netting, Carnegie Museum, Pittsburgh, Pa. This four-page leaflet lists all the above species which occur in Pennsylvania, namely, 19 different kinds of salamanders, 14 frogs and toads, 13 turtles, 4 lizards, and 23 snakes. Copies of the leaflet can be secured by writing direct to Mr. Netting.

Jack Miner, pioneer Canadian naturalist, gives in his new book, "Jack Miner and the Birds," an inspiring account of his experiences with song birds and waterfowl.

Mr. Miner has caught and banded hundreds of wild ducks and geese. The bands have been returned from Eskimos and missionaries living in the Far North, and from hunters living on the southeastern seaboard of the United States. This record of the wanderings of his feathered friends is as interesting as any piece of fiction.

The book is profusely illustrated with beautiful photographs, and is published by the Reilly and Lee Company, Chicago, Ill.

The comparatively new treatment for heart-worm infestation in dogs has given good results in most cases when used by practicing veterinarians, according to a check made recently by zoologists of the United States Bureau of Animal Industry.

The treatment, which was perfected by zoologists of the Bureau and has been used for more than a year, consists of injections into the blood stream of the drug known as Fuadin. Dogs affected with heart worms may become greatly exhausted when hunting and many of them die.

In checking the effectiveness of the remedy, the Bureau's study showed that out

of a total of 1,000 dogs treated by the method, more than 90 per cent were restored to usefulness. Blood tests of dogs that had received treatment showed that the microscopic parasite had disappeared from the blood stream. The remedy is therefore considered the most practical means of treating heart-worm disease in dogs.

The Pennsylvania Forestry Association celebrated its 50th anniversary this year by holding a joint meeting with the American Forestry Association at Eagles Mere.

The joint gathering expressed their belief that all roads on primitive forest areas should be closed except for administrative purposes, that conservation be taught more widely in the public schools, that county conservation units be organized, and that C.C.C. camps be continued so long as the unemployment problem exists.



Wm. Kiehlbauch of Avon, South Dakota, has been unusually successful in raising wild geese. An account of his experiences will appear in a future issue of the GAME NEWS.

For the first time in the history of the United States it is illegal to shoot canvasback and redhead ducks at any time. The new migratory waterfowl hunting regulations for the 1936 season place these birds on the list of fully protected species.

These two diving ducks are the most palatable of all game birds. During the days of heavy market hunting, canvasbacks sometimes sold as high as \$10.00 to \$12.00 a brace. This condition resulted in a noticeable decrease in their numbers in the Northern Central States as early as the '50's and '60's.

It is believed that with proper management and protection both of these game birds may be returned to a numerical

strength that again will provide good shooting for sportsmen.

Over 13,000,000 muskrats are trapped annually in the United States. The future of the species is still problematical, according to Dr. Frank C. Ashbrook of the Biological Survey. Research has so far failed to reveal whether or not the annual number propagated exceeds the annual number trapped.

Game officials and sportsmen of New Jersey are seriously considering the advisability of establishing some form of game conservation study in the junior high schools. The Pennsylvania Game Commission, some years ago, furnished similar material for use in our own public schools, and the ground work is now being laid for a more comprehensive program. A similar plan is also being worked out for 4-H clubs.

L. S. Gross, U. S. Forest Supervisor, Allegheny National Forest, claims that the small game populations are very much lower than they were last season. Apparently there are only about one-fourth the rabbits, one-sixth the squirrels, and one-eighth the grouse that there were last year. A poor nut crop caused the squirrels to migrate last season and a similar shortage this year leaves little hope that they will return. Grouse and rabbits seem to be following cyclic tendencies and if predictions are correct, we might have even fewer rabbits and grouse next year.

Dr. Frank Oastler, surgeon and nationally known naturalist, has bequeathed a fund of more than \$20,000 to the Department of Forestry of Yale University, to be used for the conservation of wildlife.

The exciting sport of killing bald eagles from airplanes recently brought a critical report from Frederick H. Dale, zoology graduate of the University of California.

In a survey for the university, Dale reported more than 200 bald or American eagles had been "slaughtered" recently by hunters operating from airplanes over northern California.

Both the American and golden eagles are protected by California State law.

The value of birds to the farmer in the eastern part of the country averages 22c an acre and in the western, 13c an acre. The state or nation which underestimates the value of these feathered hosts courts disaster.

(Continued on page 24)



# HUNTING LICENSE REVOCATIONS

Wilbur Allen, Dry Run, Franklin, July 2, 1937; Guy Ames, R. D. No. 2, Corry, Erie, July 11, 1937; John Anderson, R. F. D. 1, Markleton, Somerset, July 2, 1938; Bert Andreolli, R. D. 1, Washington, Washington, July 2, 1938; Angelo Angelini, Maplewood, Wayne, July 11, 1937; Henry Appenzeller, R. F. D. No. 3, Moscow, Lackawanna, July 2, 1938; Patsy Augemire, Marienville, Forest, July 2, 1937.

Dorr, Bailey, R. D. Troy, Bradford, Dec. 29, 1939\*; Samuel L. Bailey, R. D. Coudersport, Potter, July 11, 1938; John Baker, R. D. Portage, Cambria, July 2, 1939; Blair Barger, Moshannon, Centre, July 2, 1937; Lee Basile, Box No. 1, Rossiter, Indiana July 2, 1937; Elton Batholomew, R. D. No. 1 Sabinsville, Potter, July 2, 1938; Roy Bell, R. D. No. 2, Waymart, Wayne, July 2, 1937; William Beneski, 131 Yale St. Parsons, Luzerne July 11, 1945\*; F. F. Bergdoll, 1034 N. George St. York, York, Sept. 24, 1937; Albert Bernard, R. D. 2, Tidioute, Warren, July 11, 1937; B. H. Bickel, Tylersburg, Clarion, July 2, 1937; Ralph F. Bishop, Green St., Honesdale, Wayne, July 2, 1938; Charles Black, R. D. No. 3, Pottstown, Montgomery, July 2, 1939; C. N. Blatchley, R. D. No. 2, Erie, Erie, July 11, 1937; Lewis Blitz, Canadensis, Monroe, July 2, 1937; Daniel Bocchine, 2429 S. 13th St., Philadelphia, Philadelphia, July 11, 1937; Henry Borrell, R. D. No. 4, Norristown, Montgomery, July 2, 1937; Antonio Bove, 100 Cameron Rd., Willow Grove, Montgomery, July 2, 1937; John Bower, R. D. No. 4, Greenville, Mercer, July 11, 1937; Boyd Bowers, R. D. No. 1, Port Allegany, McKean, July 11, 1938; Wm. W. Bradshaw, Jr., 265 Hollywood Drive, non-resident, Trenton, N. J., July 2, 1938; William Brezenski, R. D., Reynoldsville, Jefferson, July 2, 1937; Carl Bright, R. D. No. 3, Warren, Warren, July 2, 1938; Donald R. Brooke, R. F. D., Corydon, McKean, July 2, 1938; Charles Brown, Tidioute, Warren, July 11, 1937; Edw. Brown (Alias Carl) 139 E. 8th St., Erie, Erie, July 2, 1938; Elmer E. Brown, Rear 662, E. Bald Eagle St., Lock Haven, Clinton, July 2, 1937; Eugene Bruder, 832 Lawrence St., Allentown, Lehigh, July 11, 1937; Sheldon Buck, 426 N. Broad, Ridgway, Elk, July 2, 1937; J. R. Buehrle, Fryburg, Clarion, Sept. 19, 1937; Wesley Bundy, R. F. D., Newmansville, Clarion, July 2, 1937; Samuel Burkett, Penfield, Clearfield, July 2, 1938; Earl Burlingame, R. No. 1, Columbus, Warren, July 2, 1937; Carl Burrous, R. R. No. 1, Galeton, Potter, July 2, 1937; Elmer Buttorff, R. D. Millmont, Union, Sept. 19, 1937; John Bzinak, Penna. Ave., Punxsutawney, Jefferson, July 2, 1937; Anthony C. Capello, 14 Sherman St., Lock Haven, Clinton, Jan. 28, 1941\*; Willis Carlson, Reynoldsville, Jefferson, July 2, 1938; J. L. Carnahan, Heshbom, Indiana, July 2, 1937; V. C. Carnahan, R. F. D., Middleburg, Union, July 2, 1938; C. A. Carey, Gettysburg, Adams, July 11, 1937; Francis Carrow, Hazelhurst, McKean, Sept. 24, 1936; Fred Casher, Sandy Ridge, Centre, July 2, 1938; Guy E. Chilson, Renovo, Clinton, July 2, 1937; Myron Clemons, Philipsburg, Centre, July 2, 1937; Clark Cochran, Costello, Potter, July 2, 1937; Martin Colihan, Jr., 42 N. Market St., Mt. Carmel, Northumberland, July 2, 1937; Tom Collar, Moshannon, Centre, July 2, 1937; George Collars, Moshannon, Centre, July 2, 1937; Clyde Confer, Orviston, Centre, July 2, 1937; Ralph D. Cook, R. D. No. 1, Fayetteville, Franklin, Jan. 30, 1943\*; Raymond Crist, 141 E. Hope Alley, York, York, July 10, 1938\*; Malcom Crull, R. D. Landisburg, Perry, July 2, 1937; Troy Cunningham, Miola, Clarion, July 2, 1938; Dave Curry, Miola, Clarion, July 2, 1937; Irene Cusmerotti, Force, Elk, July 2, 1938; John W. Davis, Karthaus, Clearfield, July 2, 1937; Edward Dawley, Genesee, Potter, July 2, 1938; Purley Dehass, Blanchard, Centre, July 2, 1938; Silvio D'Ignazio, R. D. No. 2, Media, Dela-

Believing it to be a means of more thoroughly checking on anyone who might seek further to violate the law by hunting before the expiration of revocation period, the following list is set forth for the convenience of County Treasurers, officials charged with the enforcement of the Game, Fish and Forest Laws, and interested sportsmen.

ware, July 2, 1939; Hastings Dlse, R. D. Perkaskie, Bucks, July 2, 1938; John Donnelly, Star Route, Clarendon, Warren, July 2, 1938; David Dorman, Millmont, Union, July 2, 1939; Ellis C. Drew, 57 Olean St., Bolivar, N. Y., Non-Resident, July 11, 1937; Oley Dudley, R. D. No. 1, Port Allegany, McKean, July 11, 1937.

Clyde Eddings, R. D., Emporium, Cameron, July 11, 1937; George English, R. D. No. 1, Girard, Erie, July 2, 1937; Hobart English, R. D. No. 1, Girard, Erie, July 2, 1937; Andrew Estochin, 69 Park Ave., Swoyersville, Luzerne, July 2, 1938; Mitchell Everett, R. D. No. 1, West Monterey, Clarion, July 2, 1937; Michael Ezzo, 3926 Arcasia St.,

gheny, July 11, 1937; Joseph Galli, 1729 Park Ave., Shamokin, Northumberland, July 2, 1938; Nick Garvin, Box 42, Kinzua, Warren, July 11, 1937; Bernard J. Gatesman, Lucinda, Pa., Clarion, July 11, 1937; Haven Gelse, Woolrich, Clinton, July 2, 1938; Chester Gelsey, 513 Calder St., Hbg., Dauphin, July 2, 1937; Albert George, R. D. No. 1, Kresgeville, Carbon, Dec. 12, 1937; Ralph Glas, Star Route, N. S., Oil City, Venango, July 11, 1937; Phillip Gleaner, Lansdale, Montgomery, July 2, 1938; George Gover, E. Mill St., Nesquehoning, Carbon, July 11, 1937; Robert E. Gradler, 909 W. 8th St., Erie, Erie, July 11, 1937; James Gray, Marysville, Perry, July 2, 1937; A. R. Greak, 27 Grove St., Lock Haven, Clinton, July 2, 1937; Phillip Green, R. D., Estella, Sullivan, July 11, 1937.

Merle Hale, West Middlesex, Erie, July 2, 1937; Ralph Hanes, St. Marys, Pa., Elk, July 11, 1937; John H. Harger, R. D. No. 3, Pleasantville, Venango, July 2, 1938; Clarence Stanley Harrison (Alias "Red" Harrison) R.D. Dushore, Sullivan, Sept. 19, 1937; Ross Hartzel, Knox, R. D. No. 2, Clarion, July 2, 1937; Herman Hass, Willow Grove, Montgomery, July 2, 1938; John Haug, 2144 E. Ann St., Philadelphia, Philadelphia, July 2, 1938; Reinhold Haug, 2144 E. Ann St., Philadelphia, Philadelphia, July 2, 1938; Isaac Heater, Matamoras, Pike, July 2, 1937; R. S. Hedden, 203 Wood St., Clarion, Clarion, July 11, 1937; Russell Herman, Millmont, Union, July 2, 1937; David H. Heydt, R. D. No. 1, Kresgeville, Carbon, Dec. 12, 1937; Clyde Hileman, 62 Whiteman Avenue, Uniontown, Fayette, July 2, 1938; George Hill, 17909 Wildwood St., Cleveland, Ohio, Non-Resident, July 11, 1937; John Hollister, R. D. No. 3, Moscow, Lackawanna, July 2, 1938; Glenn W. Honhart, Youngsville, Warren, July 2, 1938; John Hoover, Sandy Ridge, Centre, July 2, 1939; Wilmer Hoover, Powelton, Centre, July 11, 1937; Chas. E. Horton, Mines, Blair, July 11, 1937; Henry Huber, R. D. No. 2, Oil City, Venango, July 11, 1937; John Hudak, 635 E. Lackawanna Ave., Olyphant, Lackawanna, July 2, 1937; H. H. Hyams, Mayview Drive, Bridgeville, Allegheny, July 2, 1938.

Stanley Irwin, R. D. No. 1, Saegerstown, Crawford, July 2, 1937; Alex Ishman, Clarington, Forest, July 2, 1938; Frank Ishman, Cherry Grove, (Clarendon, P. O.) Warren, July 2, 1938.

Lamont A. Jacobs, R. D. No. 4, Coudersport, Potter, July 2, 1937; Herbert Jerles, Cross Fork, Potter, July 11, 1937; Roy Jerles, Cross Fork, Potter, July 11, 1937; Andy Johnson, R. D. No. 1, Warriors Mark, Centre, July 2, 1937; Jacob Johnson, Wapwotlopen, R. D. Luzerne, July 2, 1937; Charles Jordon, R. F. D., Middleburg, Union, July 2, 1938; Lincoln Jordon, R. F. D., Middleburg, Union, July 2, 1938; Mervin Jordon, R. F. D., Middleburg, Union, July 2, 1938; Thomas Jordon, Moshannon, Centre, July 2, 1937; Walter Jordon, R. F. D., Middleburg, Union, July 2, 1938.

Clarence Kaiser, Conneautville, Crawford, July 2, 1937; Homer Keiter, R. D. No. 1, Millersburg, Dauphin, July 2, 1938; Troy Kelley, Fairchance, Fayette, July 2, 1938; J. G. Kiernan, 28 Pine St., Warren, Warren, July 11, 1937; Robert F. Knight, 103 Libert St., Ashley, Luzerne, July 2, 1937; Bradley Kocher, White Haven, Luzerne, July 11, 1937; Joseph Kozlowski, R. D. No. 1, Lake Ariel, Wayne, July 2, 1937; Stanley Koznicki, 31 Carey St., Ashley, Luzerne, July 2, 1938; Edward Krawcewicz, 285 Main St., Luzerne, Luzerne, July 2, 1938; Frank Krielesski, R. D. No. 3, Waterford, Erie, July 2, 1937; Clarence Kler, Westline, McKean, July 2, 1938; George Knapp, Albion, R. D. No. 1, Erie, July 2, 1938; Jacob Knapp, Han-

SAFETY FIRST

BEFORE YOU SHOOT

STOP

BE CAREFUL

LOOK



Pennsylvania Board of Game Commissioners  
Harrisburg, Pa.

Ten thousand of the above Posters, size 11x14 inches, and in three colors, have been widely distributed throughout the State, to protect hunters.

Philadelphia, Philadelphia, July 2, 1938; Charles Feaster, Millmont, Union, July 2, 1937; Parker Fessler, Marysville, Perry, July 2, 1937; John Fidler, R. D. Loganton, Clinton, July 2, 1938; Woodrow Fidler, R. D., Loganton, Clinton, July 2, 1937; Mark Fiscus, R. D. 3, Meadville, Crawford, July 2, 1938; George Fleck, 640 Munech St., Harrisburg, Dauphin, July 2, 1937; Ira Forry, 120 Conoy St., Harrisburg, Dauphin, July 2, 1937; Joe Francis, R. D. No. 2, Tunkhannock, Wyoming, July 2, 1939; Roydon Freed, Black Lick, Indiana, July 2, 1937; William Freeland, Enhaut, Dauphin, July 11, 1937; James Fridley, 339 E. 15th St., Erie, Erie, July 2, 1938; Lee Friermuth, Milanville, Wayne, July 2, 1937; W. S. Frisbie, Hancock, N. Y., Non-Resident, July 2, 1937; George Frontz, Water St., Northumberland, Northumberland, July 2, 1937; James Fuller, Clermont, McKean, July 11, 1937; Ralph Fulton, Route No. 4, Erie, Erie, July 2, 1937; Clair

\* Revoked by Court.



cock, N. Y., Non-Resident, July 2, 1937; Paul Komara, Homestead, Allegheny, July 2, 1938; Chester Kublic, R. D. Port Trevorton, Snyder, July 7, 1937; George Kuhn, Meadville, Crawford, July 2, 1938; Benny Kuklinski, R. D. No. 2, Linesville, Crawford, July 2, 1937; S. P. Kumpfmliller, 412 Colton St., Millvale, Allegheny, July 11, 1937; Lawrence Kurtzhul, R. D. No. 1, Shippensburg, Clarion, July 11, 1937.

Merrill Lamar, 206 Walnut Ave., Altoona, Blair, July 2, 1939; John Lancy, Keating Summit, Potter, July 11, 1937; Fred Lang, R. D. No. 2, Albion, Erie, July 2, 1937; John Lapanna, 219 E. Clinton, L. Haven, Clinton, July 11, 1937; James C. Lauffenberger, 106 Orchard St., Warren, Warren, July 11, 1937; Wayne Layton, Amaranth, R. D. No. 1, Fulton, July 2, 1938; Earle Letson, Eldred, R. D., McKean, July 2, 1938; Peter Leunes, Main, St., Honesdale, Wayne, July 2, 1937; Vaughn Lewis, 558 Carey Ave., Wilkes-Barre, Luzerne, July 2, 1938; Paul Litwiler, R. D. No. 2, Conneaut Lake, Crawford, July 2, 1937; Roy Loney, R. D. No. 3, Warren, Warren, July 2, 1938; Lester Lowmaster, R. D. Punxsutawney, Jefferson, July 2, 1938; Joseph Lucidia, 1115 Revere, Trenton, N. J., Non-Resident, July 2, 1937; Dick Luhman, Greeley, Pike, July 2, 1937; L. K. Lukacs, R. D. No. 5, North East, Erie, July 2, 1937; Clarence W. Lurting, 516 Federal, Pittsburgh, Allegheny, July 5, 1937.

Chas. Mackiewicz, R. D. 1, Trucksville, Luzerne, July 2, 1938; Clarence Mahlon, Gramplan, Clearfield, July 2, 1937; George Mains, R. D. No. 4, Meadville, Crawford, July 2, 1937; Sulo Maki, R. D. 1, W. Springfield, Erie, July

er, R.F.D. No. 1, Altoona, Blair, July 11, 1937; Vinenzio Muncia, 236 Chestnut St., Ambler, Montgomery, July 2, 1937; Paul Myers, R. F. D. No. 1, Warriors Mark, Centre, July 2, 1937.

Merle Nace, R. F. D. No. 4, Mechanicsburg, Cumberland, July 2, 1938; Robert Nace, R. F. D. No. 4, Mechanicsburg, Cumberland, July 2, 1938; Cecar Nicolai, 443 Old Elm St., Conshohocken, Montgomery, July 2, 1939; Norman J. Money, Linesville, Crawford, July 2, 1938.

Oscar Osgood, R. F. D. No. 2, Ulysses, Potter, July 11, 1937.

Emro Pachipka, Moshannon, Centre, July 2, 1937; Peter Paglia, Wharton, Potter, July 2, 1937; George, Nicholas Pappa, 632 Sansom St., Willow Grove, Montgomery, July 2, 1938; Pellyrino Parins, 331 Hallstead Ct., Scranton, Lackawanna, July 2, 1937; Anton Pechacek, 416 Hamilton St., Allentown, Lehigh, July 2, 1938; J. Wilbur Pensinger, Richmond Furnace, Franklin, July 2, 1937; Leo Peterman, Sonestown, Sullivan, July 2, 1938; Maude Peterman, Sonestown, R. F. D. Sullivan, July 2, 1938; George Petric, Clarksville Ave., Greenville, Mercer, Sept. 24, 1936; Joe Petruse, 238 Allegheny St., Meadville, Crawford, July 2, 1937; Domanico Piersimoni, 609 Ridge Rd., Peckville, Lackawanna, July 11, 1937; Harold Pierson, R. F. D. No. 163, Philipsburg, Clearfield, July 2, 1937; Jos. Pietruszkiewicz, 700 Carmalt St., Dickson City, Lackawanna, July 2, 1937; Clifford Pinney, Box 227, Linesville, Crawford, July 2, 1937; Stanley Plashonko, Philipsburg, Centre, July 2, 1937; Edwin R. Porter, 556 W. Main St., Lock Haven, Clinton, July 2, 1939;

George Schramm, Berwyn, Chester, July 2, 1937; Karl Schramm, Berwyn, Chester, July 2, 1937; Wm. Scott, Jr., 24½ W. 45th St., Bayonne, N. J., Non-Resident, July 11, 1937; Elmer Scull, Force, Elk, July 2, 1938; Harold Seicker, 317 Benedict St., St. Marys, Elk, July 2, 1938; John Seicker, 317 Benedict St., St. Marys, Elk, July 11, 1937; Paul M. Seiple, 120 Washington St., Bangor, Northampton, April 9, 1941; Adelmo L. Sereni, 528 S. 52nd St., Philadelphia, Philadelphia, July 11, 1938; Chas. Seyler, R. F. D. No. 1, Port Allegany, McKean, July 11, 1937; Homer Shaffer, R. F. D. No. 5, Tunkhannock, Wyoming, July 2, 1938; Ray Shaffer, Allen Mills, Jefferson, July 2, 1937; Randal Shilling, Coburn, Centre, July 2, 1937; William Shimko, R. F. D., Markleysburg, Fayette, July 2, 1938; Leo J. Sick, Dushore, Sullivan, July 2, 1938; Arnold A. Simpson, Rockland, Venango, July 2, 1938; Harry Simpson, Moore Apts., Du Bois, Clearfield, July 2, 1937; Bert Sisko, 115 Missouri St., Franklin, Venango, July 2, 1937; Russell Slagle, Bruin, Butler, July 2, 1938; Donald Sloan, R. F. D. No. 1, Olean, N. Y., Non-Resident, July 11, 1937; Andrew Slupski, R. F. D. No. 5, North East, Erie, July 2, 1937; Anderson Smeal, R. F. D., Woodland, Clearfield, July 2, 1938; William Smeal, R. F. D., Woodland, Clearfield, July 2, 1938; John Smereski, 337 W. Union St., Nanticoke, Luzerne, July 2, 1937; Albert Smith, R. F. D., Morrisdale, Centre, July 2, 1937; Earl Smith, R. F. D., Osceola Mills, Centre, July 2, 1938; George R. Smith, Sonestown, R. F. D., Sullivan, July 2, 1938; James Smith, 4th & Delaware Ave., Lester, Delaware, July 2, 1939; Joseph O. Smith, R. F.



The savage returns from the hunt.

2, 1937; Elmer Manning, 305 James St., Milton, Northumberland, July 2, 1937; Frank Maradeo, E. Mill St., Nesquehoning, Carbon, July 11, 1937; Vincint Marnatti, Force, Elk, July 2, 1938; Earle Martin, Kinzua, Warren, July 2, 1938; Roy Mays, Star Route, Clarendon, Warren, July 2, 1938; Patrick Mazzaccaro, 301 Mary St., Old Forge, Lackawanna, July 2, 1937; Clarence McCloskey, Snow Shoe, Centre, July 11, 1937; Beauford McDonald, Reynoldsville, Jefferson, July 2, 1938; James McElroy, Mines, Blair, July 11, 1937; George H. McGregor, 989 28th St., Altoona, Blair, July 11, 1937; Jesse McGregor, Mines, Blair, July 11, 1937; John McGregor, Mines, Blair, July 11, 1937; Colonial McIntyre, Pittsfield, Warren, July 2, 1938; W. R. McMillen, Black Lick, Indiana, July 2, 1937; Jacob Lester Meckley, 137 Bainbridge St., Elizabethtown, Lancaster, July 2, 1941; Albert Mellert, R. D. No. 3, Moscow, Lackawanna, July 2, 1938; Pasquale Micale, R. D. No. 1, Kane, McKean, July 2, 1937; W. C. Michael, R. D. No. 3, Grove City, Mercer, July 2, 1937; David Miller, R. D. Emporium, Cameron, July 2, 1937; Howard Miller, E. Mill St., Nesquehoning, Carbon, July 11, 1937; Kenneth Mincer, Hyner, Clinton, July 2, 1938; Theodore Mix, Sinnemahoning, Cameron, July 2, 1938; Raymond Montague, Hughesville, Lycoming, July 2, 1938; Alfred Morrey, Sugarloaf, Luzerne, July 11, 1937; James R. Morrison, R.F.D. No. 1, Landisburg, Perry, July 2, 1937; Ray P. Moy-

Perley Powell, 1128 West St., Meadville, Crawford, July 2, 1937; Edmund Prenatt, Cochran, Crawford, July 11, 1937; George Prough, Calvin, Huntingdon, July 11, 1937; Joe Prudish, 718 Hall Ave., Saint Marys, Elk, July 2, 1938.

Charles Rebar, R. F. D. No. 2, Lewisburg, Union, July 2, 1938; Lloyd Reed, R. F. D. No. 1, Northumberland, Northumberland, July 2, 1937; Louis Reiter, R. F. D. No. 1, Dysart, Cambria, July 2, 1938; Roy Reynolds, Ralston, Lycoming, July 2, 1939; George Rhoads, West Fairview, Cumberland, July 2, 1938; Harold Richart, Hughesville, Lycoming, July 2, 1939; Frank C. Richland, Dushore, R. F. D., Sullivan, July 11, 1937; Merrill Robb, Blanchard, Clinton, Sept. 24, 1937; Frank Rodgers, R. F. D., Trough Creek, Huntingdon, July 2, 1938; Ernest Rolley, Karthaus, Clearfield, July 2, 1937; Roy Rowan, R. F. D. No. 1, Reynoldsville, Jefferson, July 2, 1938; Ernest Royers, R. F. D., Eldred, McKean, July 2, 1938; Wilbur Ruhl, Millmont, Union, July 2, 1937; Philip Russo, 134 S. Main St., Pittston, Luzerne, July 2, 1937; Ira D. Ryan, R. F. D. No. 3, Cumberland, Md., Bedford, July 2, 1938.

Mike Sackash, Cramer, Indiana, July 7, 1942; Roy Sampson (Alias "Roy Moor"), R. F. D. No. 4, Mechanicsburg, Cumberland, July 2, 1938; Alvin Schnars, Philipsburg, Centre, July 2, 1938; Fred Schonwalder, R. F. D., Woodland, Clearfield, July 2, 1938;

D., Salona, Clinton, July 5, 1937; Raymond Smith, R. F. D., Reynoldsville, Jefferson, July 2, 1937; Alton Snyder, Keating Summit, Potter, July 11, 1937; Earnest I. Speary, Nordmont, Sullivan, July 11, 1937; Angelo Speteri, North Girard, Erie, July 2, 1937; Samuel Starr, Branchdale, Schuylkill, July 2, 1938; Frank Steele, R. F. D. No. 2, Garrett, Somerset, July 2, 1938; Carl Stemple, Conneaut, Ohio, Non-Resident, July 2, 1938; Stephen Showers, Annville, Lebanon, Sept. 7, 1939; Samuel Stewart, R. F. D., Wapwallopen, Luzerne, July 2, 1938; G. D. Still, 3935 Cabinet St., Pittsburgh, Allegheny, July 11, 1937; Elmer Strohl, R. F. D. No. 1, Kresgeville, Carbon, Dec. 12, 1937; Emerson Strohl, R. F. D. No. 3, Lehigh, Carbon, July 11, 1945; Ray Swan, R. F. D. No. 2, Ulysses, Potter, July 2, 1937; William Swires, West Hickory, Forest, July 2, 1937; Sylvester Szymek, 1436 E. 7th St., Erie, Erie, July 2, 1938.

Charles F. Tate, 25 W. 2nd St., Lansdale, Montgomery, July 2, 1938; Locher Tenney, R. F. D. No. 3, Meadville, Crawford, July 2, 1938; Tony Testa, Vine St., Greensburg, Westmoreland, July 2, 1938; Albert Tripp, Shintown (Renovo) Clinton, July 2, 1939; Bryan Tripp, Shintown (Renovo) Clinton, July 2, 1938; Lynn Tubbs, Westfield, Tioga, July 2, 1938.

Andrew Vaccaro, 210 Franklin Ave., Susquehanna, Susquehanna, July 2, 1938; Charles (Continued on page 24)



# PLANTING NUT AND FRUIT TREES

(Continued from page 19)

There are now about 7,000 Boy Scouts in Allegheny County. For a number of years the Pittsburgh Chamber of Commerce has been offering a silver cup to the troop planting the most nuts in the country. The troop awarded the cup for the Fall of 1934 planted about 24,000 nuts of different species.

The National Council of the Boy Scouts of America has set aside one week every Fall known as "Boy Scout Nut Planting Week" in which over 800,000 Scouts gather and plant all varieties of nuts.

Scouts enjoy nut and fruit tree planting hikes. They enthusiastically plant trees from which in five to eight years they will share fruit and nuts with wildlife, but they are less interested in planting trees which when matured in 50 to 100 years will be cut for lumber.

Although our sportsmen, who will benefit most from the Scouts' activities, have been doing commendable work in the preservation of our wildlife, assisting in the purification of streams, artificial feeding of game in the Winter, and other conservation measures, many of them have overlooked the natural feeding of the upland game which winters with us.

In fact I have often seen a hunter kill a squirrel in the act of burying a nut, pick up the carcass and start off in search of another tree, leaving the squirrel's nut, which would have meant another tree, unplanted beside

the hole the animal had prepared.

Nut planting is a simple matter for the hunter, when the nuts are dropping from the trees. The only tool he needs in planting walnuts, butternuts, hickory and other nuts is a small garden trowel or a sharpened stick to make a hole four inches deep. If he lacks these, he can use his boot heel to drive the nuts into soft ground.

Nut trees have tap roots and should be planted 40 feet apart in good deep ground, where they will not interfere with farming, preferably on the edge of woods or along country roads as both nut and fruit trees require sunshine to mature.

Walnuts and butternuts have a hull which contains fertilizing elements so it should be left on the nut, but crushed with the heel when planted. Hulled nuts will grow but they should be planted in the Fall before they dry. If squirrels, the original nut planters, are likely to dig them up, place a stone or a piece of chicken wire over them; these should be removed in the Spring before the nuts sprout.

During the present depression many of our unemployed have gathered and sold nuts. Nut kernels have many uses, and are a delicious, valuable and wholesome food.

\*"It takes 33 pounds of food to grow one pound of meat in a steer. Every pound of milk takes 5 pounds of food to produce. A pound of eggs takes twenty pounds of food

for the hen. But it is reliably stated that one pound of walnut meats has the value of five pounds of eggs, nine and a half pounds of milk or four pounds of beef loin.

Nuts are rich in proteins, oils and starches, one kind having more of one and less of another food element. Walnuts are rich in oils and protein with less starch. Chestnuts have less oil and more starch. But a mixed nut, vegetable and cereal diet can be readily made complete with practically no meat. Nuts contain important vitamins also."

A farmer in Iowa recently paid off a large mortgage on his farm by selling the black walnut trees on his woodlot, realizing from \$25.00 to \$235.00 a tree.

Many of us insure our lives for the benefit of our children. Why not plant a grove of nut trees for the benefit of posterity? For the value of these trees, both aesthetic and commercial, is unchallengable and in augmenting your possessions by planting them you will also have the joy of knowing that you are providing food for the wildlife of the nation.

There is no more timely project or worth while program in which our people can engage than in helping the Boy Scouts of America and cooperating agencies in realizing the slogan "Help America Bring Back Her Native Nut and Fruit Trees For The Benefit of Humanity and Wild Life."

\*"Nut Growing," by Morris—page 25.

# FOOD DEVELOPMENT ON STATE GAME LANDS

(Continued from page 17)

removal of all competitive growth surrounding clumps of game food producers or on areas where they can be encouraged, permitting sunlight to enter and thereby stimulating the production of game food plants and the fruit on such plants. Sprouts from hardwood stumps will also provide browse for deer and rabbits.

The plots vary in size from a fraction of an acre to several acres. Some are made primarily to promote the growth of blackberries, others to stimulate the production of grapevines, while additional ones are made around other clumps of game food plants.

An attempt will be made to distribute the plots fairly evenly over each tract of land where needed. In each case the location is selected with care as the plans call for maintaining them permanently for the production of game food. Insofar as possible, their locations are confined to waste land, or near waste land, areas where as small an amount of tree growth as practicable will be sacrificed.

As additional game food producing shrubs become available for planting, some of them will be placed in these permanent game food

plots in order to provide more of a variety of food.

Different methods of carrying on the work are being tried out to determine the most practical and economical way. For the most part the plots are cut in long narrow strips, 40 to 60 feet wide. Part of the brush is piled near the plot for escape cover. Where a large amount results it is piled and will be burned during the winter when no danger of forest fire exists. The burning of some of the brush piles will result in ashes for dusting by birds and animals.

The results obtained thus far on the release cuttings to provide permanent natural feeding plots are most encouraging. The full benefits of the cuttings made this year will not, however, be noticeable for a year or two. It is encouraging to note also that the program is meeting with general approval of all sportsmen who have come in contact with it.

During the winter months, in addition to the release cuttings, thinnings will be made where necessary to provide additional deer food and to promote sprout growth upon which the deer can feed later.

On nearly all tracts of game lands there are many apple trees which are a source of much food for practically all kinds of game. Many of them do not bear the crop of fruit which they should and could bear. In order to provide better fruiting conditions many thousands of these trees were pruned and where necessary released from suppression. During the coming winter additional ones will be pruned. The winter months are best as the cut branches are utilized as food by deer and rabbits.

The C. C. C. Camps on game lands have been of great benefit in assisting to carry out the development program. The supervisory personnel are all greatly interested in game and they are cooperating splendidly with field officers of the Game Commission in providing better food conditions.

The Game Commission will welcome the cooperation of sportsmen's organizations and interested individuals in an effort to improve food and cover conditions for game on all areas where treatment is warranted. Naturally the Commission's main efforts must be concentrated on lands under their control.



## SCATTER LOADS

(Continued from page 20)

An injured pigeon was found recently on the crest of Tussey Mountain east of Martinsburg, Blair County. The leg band bore the inscription "McK-2264-Aug. 1936." If any of our readers know persons who raise carrier pigeons we would appreciate their passing this information on to them. The bird is now in the possession of Dr. H. E. Henry, Martinsburg, Penna.

A banded osprey, according to the Biological Survey, lived to the ripe old age of 21 years.

A skunk recently entered the home of Harry Dickey, Ligonier, Pa., through the cold air pipe of the furnace and made his way through the pipe into the furnace. Mr. Dickey, upon hearing scratchings in the humidifier box, opened it and found the skunk.

Confronted with the problem of how to

get the animal out, Mr. Dickey came to the conclusion that it would be best to leave the door of the furnace open as well as the cellar door, so Mr. Skunk could make his exit of his own accord, which he did very shortly afterwards, much to the relief of the Dickey family.

A Wisconsin sportsmen's group recently insisted that all members eat crows or drink an ounce of castor oil. The black "partridges" were eaten and pronounced good.

A stomach analysis made by W. J. Hamilton, Jr., Cornell University, of 206 fall and winter red foxes from New York and New England revealed the following: mice, 29.3; rabbits, 22.1; grasses, 13.9; sticks, dirt, trash, 6.2; carrion, 8.1; fruit, 5.3; insects, 3.4; poultry, 3.1; squirrels, 2.9; porcupine, 1.8; game birds, 1.4; small birds, .5; shrews, .8; worms, .8; grain and nuts, .4.

The Fur Animal Station of the United States Biological Survey at Saratoga Springs, New York, announces that the results of their research and experimental work in feeding, breeding, and managing foxes, minks, and martens are available to fur farmers, the fur trade, and others interested in fur farming.

The General Federation of Women's Clubs of America is conducting an extensive program of conservation education throughout the whole country.

Doctor P. F. English, Associate Professor of Forestry and Wildlife Management at Connecticut State College, Storrs, Connecticut, writes, "Your Pennsylvania Game News is getting better and better. I would appreciate your sending me reprints of the various papers appearing in this wildlife magazine."

## HUNTING LICENSE REVOCATIONS

(Continued from page 22)

Vogel, Sonestown, R. F. D., Sullivan, July 2, 1937; David Vogus, Dempseytown Rd., Oil City, Venango, July 2, 1938.

Earl Walburn, Grampian, Clearfield, July 2, 1937; Michael Walskelefski, R. F. D. No. 2, Clarks Summit, Lackawanna, July 2, 1938; Sam Walton, Kellettville, Forest, July 2, 1938; Aaron Wandall, R. F. D. No. 2, Mehoopany, Wyoming, July 2, 1938; John Ward, R. F. D., Morrisdale, Clearfield, July 2, 1937; S. W. Ware, R. F. D. No. 3, Cumberland, Md., Bedford, July 2, 1938; John Wasko, 85 E. 26th St., Bayonne, N. J., Non-Resident, July 11, 1937; Vincent Waslick, 18 Daring Center, Luzerne, July 2, 1938; H. W. Watkins, Tylersburg, Clarion, Sept. 19, 1937; Bruce Weaver, R. F. D., Centre Hall, Centre, July 2, 1937; Harry Weaver, R. F. D., Howard, Centre, July 2, 1938; Walter Weaver, R. F. D., Howard, Centre, July 2, 1938; James Welder, Grampian, Clearfield, July 2, 1937; Oliver Welder, Grampian, Clearfield, July 2, 1937; Myers Westover, Alum Bank, Bedford, July 11, 1937; Junior White, Linesville, Crawford, July 2, 1937; Joe Vietish, Philipsburg, Centre, July 2, 1937; Wilhide, 604 W. Locust St., York, York, July 2, 1938; Jack Wilkins, R. D. No. 2, Mehoopany, Wyoming, July 2, 1937; John Wilkison, 435 3rd St., Northumberland, Northumberland, July 2, 1937; J. P. Willenbucke, R. D. No. 2, Erie, Erie, July 11, 1937; Frank Williams, Linesville, Crawford, July 2, 1937; Leo Williams, Markleysburg, R. D. 2, Fayette, July 2, 1938; A. Wilson, R. D. 2, Linesville, Crawford, July 2, 1937; Clyde A. Wilt, 1410 5th Ave., Juniata Blair, July 11, 1937; F. D. Winner, Jr., Lock Haven, Clinton, July 11, 1937; John Wolf, East Branch, Sheffield, Warren, July 11, 1937; Robert Wood, 529 Susquehanna Ave., York, York, July 2, 1937.

Nevin Yarnell, Mingoville, Centre, July 2, 1938; Lloyd Yeager, Orviston, Centre, July 11, 1937; Mike Yesko, 949 Sherman Ave., Sharon, Mercer, July 11, 1937; Floyd Young, Vandergrift, Westmoreland, July 2, 1937; Steve Young, Waterford, Erie, July 2, 1937. Leslie J. Zane, 1450 E. Lycoming St., Philadelphia, Philadelphia, July 2, 1938; Charles Zerr, R. D. No. 1, Gilbertsville, Montgomery, July 2, 1938.

### SUPPLEMENTAL LIST

The following licenses were revoked by the Board on October 8, 1936:

Chas. Lloyd Adams, Driftwood, Cameron, Oct. 8, 1937.

Marci Batista, Byrnedale, Elk, Oct. 8, 1938; Columbus Belcher, Westland, Washington,

Oct. 8, 1938; Harry Earl Billings, Driftwood, Cameron, Oct. 8, 1937; Lawrence E. Billings, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937; Leonard G. Bonanno, Weedville, Elk, Oct. 8, 1937; Joe Albert Bononno, Weedville, Elk, Oct. 8, 1937; Gilbert Bruni, Byrnedale, Elk, Oct. 8, 1938; Joseph Claude Byerly, Brookville, Jefferson, Oct. 8, 1937.

Robert Cady, R. D., Montrose, Susquehanna, Oct. 8, 1938; Geo. W. Carlson, 1125 E. 71 St., Cleveland, Ohio, Non-Resident, Oct. 8, 1937; John Casper, 2nd St., Emporium, Cameron, Oct. 8, 1937; Howard Chambers, Clarence, Centre, Oct. 8, 1938; Lynn J. Cole, Clarence, Centre, Oct. 8, 1938; Harry F. Collins, Driftwood, Cameron, Oct. 8, 1937; Alex Conforte, 274 3rd St., Coaldale, Schuylkill, Oct. 8, 1937; Gerald Lee Cox, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937; Max Chas. Cunningham, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937.

Arthur Dailey, G. Del. Johnsonburg, Elk, Oct. 8, 1938; Wm. Henry Dowell, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937; Charles Dingman, Cross Fork, Potter, Oct. 8, 1937.

Frank Lamont Ford, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937; Glen Charles Ford, Driftwood, Cameron, Oct. 8, 1937; Glenn Dana Ford, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937; Thomas Glenn Ford, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937; Charles Joseph Fox, Byrnedale, Cameron, Oct. 8, 1937; Edmund Morcus Fox, 1312 E. 108 St., Cleveland, Ohio, Non-Resident, Oct. 8, 1937; Richard Robert Fox, 1312 E. 108 St., Cleveland, Ohio, Non-Resident, Oct. 8, 1937.

Leonard O. Gardner, Weedville, Elk, Oct. 8, 1937; Wm. Francis Gunsallus, Blanchard, Centre, Oct. 8, 1938.

Edgar H. Hewitt, 129 S. Front St., Philipsburg, Centre, Oct. 8, 1937; Harry W. Hildebrand, Byrnedale, Elk, Oct. 8, 1937; Stanley N. Hobbs, LaPlume, Lackawanna, Oct. 8, 1937; Frank John Hugar, R. D. No. 1, Driftwood, Cameron, Oct. 8, 1937.

Russell Insalaco, 13 High St., Pittston, Wyoming, Oct. 8, 1937.

Chas. LeRoy James, Blanchard, Centre, Oct. 8, 1938.

Willis Keck, R. D. No. 4, Wellsboro, Tioga, Oct. 8, 1938.

Odie Everard Lantz, 1744 Grant St., Allquippa, Beaver, Oct. 8, 1937; Roy A. Laughman, R. D. No. 3, Hanover, York, Oct. 8, 1937; Thomas W. Lauver, Milroy, Mifflin, Oct. 8, 1941; Leon E. Lester, R. D. No. 1, Wellsville, York, Oct. 8, 1938; Joseph Howard Liddle, R. D. No. 1, Oil City, Venango, Oct.

8, 1937; Clair E. Loring, Black Lick, Indiana, Oct. 8, 1941.

W. E. McGearry, R. D. No. 6, Indiana, Indiana, Oct. 8, 1937; Ase McKimm, Driftwood, Cameron, Oct. 8, 1937; George N. Miller, R. D. No. 2, Latrobe, Westmoreland, Oct. 8, 1941; John W. Montgomery, R. D. No. 1, Beaver, Oct. 8, 1938; John W. Muttersbough, Driftwood, Cameron, Oct. 8, 1937.

Guieseppi N. Necora, Edmon, Armstrong, Oct. 8, 1941; Otto Nies, Spring St., Loraine (R. D. No. 3, Johnstown) Cambria, Oct. 8, 1941.

Harry A. Painter, 451 North Ave., Kittingham, Armstrong, Oct. 8, 1941; Joe Perazzi, Byrnedale, Elk, Oct. 8, 1938; Roger Poorman, N. Allegheny St., Bellefonte, Centre, Oct. 8, 1941; Sherman B. Putman, 209 Transfer Bldg., Ft. Wayne, Indiana, Non-Resident, Oct. 8, 1937.

Leroy E. Quick, R. D. No. 4, Apollo, Armstrong, Oct. 8, 1941.

Eugene Ramser, Lock Haven, Clinton, Oct. 8, 1938; Giovanni Renaldetti, 505 Grace St., Old Forge, Lackawanna, Oct. 8, 1938; Basil Richardson, Cedar Run, Lycoming, Oct. 8, 1941; Galen B. Roger, R. 266 Cypress Ave., Johnstown, Cambria, Oct. 8, 1939; Adam Milford Ross, c/o Sherman B. Putman, Ft. Wayne, Indiana, Non-Resident, Oct. 8, 1937.

Henry A. Schaller, 717 Linden St., Allentown, Montgomery, Oct. 8, 1938; Carl Lewis Schmidt, R. D. No. 1, Weedville, Elk, Oct. 8, 1937; Mathew Shadeck, Jr., Sterling Run, Cameron, Oct. 8, 1937; Nick Shedeck, Sterling Run, Cameron, Oct. 8, 1937; Ralph E. Stover, Bellefonte, Centre, Oct. 8, 1937.

James VanLuvender, Box 93, Johnsonburg, Elk, Oct. 8, 1938; Russell VanLuvender, Box 93, Johnsonburg, Elk, Oct. 8, 1938.

Harry Washington, 456 Easton Rd., Willow Grove, Montgomery, Oct. 8, 1941; Gerald F. Watson, Newport, Perry, Oct. 8, 1939; Paul Weaver, Jersey Shore, Lycoming, Oct. 8, 1941; Antoni Wicorek, 4549 Salmon St., Philadelphia, Montgomery, Oct. 8, 1938; Harry Winchester, McElhattan, Clinton, Oct. 8, 1938.

Clyde E. Young, R. D. No. 1, Pleasantville, Venango, Oct. 8, 1938.

Any of these persons securing a license either in his own or an assumed name, or hunting for wild birds or wild animals of any kind prior to the expiration of the period given, will be liable to a penalty of \$40.00 for each separate day upon which he may hunt.



# WITH THE CLUBS

## ASSETS AND LIABILITIES

In witness thereof I made twenty separate trips for squirrels, hunted in fifteen different woods, saw nineteen squirrels, shot at eleven, killed nine, one of these was stolen, two I gave to friends, two trips I nearly froze, four trips I got wet, one trip stalled in the mud, and another trip a tire blew out.

In all these trips I saw one rabbit, shot at it and missed, due no doubt to wearing an overcoat. The season cost me: License, \$2.00; 15 shells, 64c; 497 miles at 2c, \$9.94; loss of time, \$.00; catching cold, \$.00; being in misery, \$.00; total, \$12.54.

The cost of each squirrel killed in 1935 amounted to \$1.39 1-3. This does not include the extra cigars required to be smoked in order to keep in good humor so as not to have any unpleasant thoughts against those responsible for an open squirrel season in the winter time.—R. M. Straley, New Oxford, Pa.

## NOBLE SENTIMENT

J. H. Keener, business man and ardent hunter and fisherman of Maytown, Lancaster County, has requested that he be buried on "Daddy's Play Grounds," a recreational center for sportsmen, which he founded five years ago.

Two traps of modern type, whereon he conducts many registered shoots, are installed. He always participates but refuses to accept any trophies on his own grounds, despite the fact that he is a topnotcher when it comes to breaking the clays.

He has had constructed a unique band shell and on holidays he secures some of the best talent in the country to come there and entertain the public. No charge is made, and thousands gather to enjoy his hospitality.

Mr. Keener, who is now seventy years old, recently stated that he is going to bequeath the park to the town.

## LOST AND STOLEN

LOST—English setter; black ears and white ticked; weight, about 50 pounds.

STOLEN—Beagle hound; about 13 inches high; brown ears, white neck, black back with a white triangle in the center. If found, please notify the Pitcairn-Patton Township Sportsmen's Association, Pitcairn, Pa.

The Community Rod and Gun Club of Edmon, Armstrong County, recently set aside 80 acres of land as a game refuge.

## SIGNBOARDS SAVE GAME

Sportsmen's Associations can aid materially in preventing the killing of wildlife by motorists if they will see that large signboards are erected at conspicuous places along the highways in their respective counties.

A signboard 4 feet by 5 feet fastened on a framework of 2 by 4's and driven into the ground near the top of a hill on a curve, where motorists are forced to slow down be-

cause of the traffic hazards, will prove both substantial and effective. Wording such as "MR. MOTORIST, SPARE THE GAME," in white or yellow letters on a black background would work out nicely.

Some clubs may have carpenters and sign painters in their organizations who would be only too glad to construct and erect signboards of this sort.

In the rural sections of New Jersey sportsmen are educating motorists by stretching banners across thoroughfares, "PREVENT THE DANGER OF FOREST FIRES CAUSED BY TOSSING LIGHTED MATCHES AND CIGARETTES AWAY." This is another game saving program worth thinking about.



D. F. Porteous, Swissvale, Pa.

Feeder made from 100 lb. carbide can, suspended upside down. The inside of the screw top was cut out and the funnel fitted to the rim. Platform is by 3 threaded rods riveted to the spout. Adjustable throat opening. Hung on apple tree all last winter without clogging.

The Hunters' and Anglers' Association of Greater Harrisburg which organized on September 15 is increasing its membership by leaps and bounds. It has adopted the Game News and the Angler officially and is issuing these publications with each membership.

The new group organized principally to establish a cooperative farmer-sportsman program in central Pennsylvania in an effort to minimize land posting.

Officers of the group include: O. O. B. Gipple, President; Wm. B. McCaleb, Vice-President; Lewis M. Kunkle, Secretary, and Donald Martin, Treasurer.

Completing a campaign against snakes, Lee A. Vonada of Coburn, representing the Spring Mills Fishing & Game Association, Cambria County, reported that he paid bounties of two cents each on 2,337 snakes killed in that section between May 1 and August 1.

Lester Kerstetter, Coburn youth, set the record for individual kills with a total of 688 snakes to his credit.

Every day brings forth reports of the success some sportsmen's clubs have had with their game food planting programs. Other associations which are carrying on such projects are urged to write the Game Commission for any suggestions or assistance they might want.

The Consolidated Sportsmen of Lycoming County raised over 500 ringneck pheasants on the association's farm this year, all of which were released in the county on a pro rata membership basis.

## PAVING THE WAY

The legislative committee of the Montgomery County Federation of Sportsmen's Clubs and the public relations committee of the Montgomery County Fish, Game and Forestry Association held a joint meeting recently with the grange representatives and general public of that county, at which the following resolutions were adopted:

Proposed legislation extending hit-run provisions in the motor vehicle law to include birds, fowl, or mammals, wild or domesticated.

Proposed legislation providing for the counties of the State to cooperate with the Game Commission in the purchase of lands for public recreation, hunting and fishing.

The Upland Crow Club, Upland, Pa., killed 14,373 crows during the past six years.

The Campbell-Fairbanks Exposition, Inc., directors of the National Sportsmen's show, will hold its annual 1937 program at the Grand Central Palace, New York, February 18 to 27.

The Jamestown Sportsmen's Association recently leased 56 acres of woodland in Cambria County for use as a refuge for rabbits, squirrels and grouse. Surplus game will be trapped out from time to time and released on open hunting territory. Game Protector Elmer B. Thompson aided the Jamestown boys considerably in this commendable undertaking.

Sportsmen of Bradford County recently organized the Eastern Bradford Rod and Gun Club, and expect soon to establish a large shooting range. The officers are: V. R. Dean, President; E. A. Osborne, Vice-President; Carlton Chaffel, Secretary, and James Cook, A. D. Manchester, Clifford Case, Dana Abbell, Walter Bates, Guy Diltz, and F. A. Moore, Directors. The primary purpose of the club is to create a farmer-sportsman alliance which will result in less land posting.



## HAWK MOUNTAIN



Osprey or Fish Hawk

Much good has been accomplished through the establishment of the Hawk Mountain Sanctuary near Dreherstown, Schuylkill County, by the Emergency Conservation Council. The editor surveyed the area on October 3 and found that hunters who formerly slaughtered thousands of these birds, many of them beneficial, from points of vantage along the Blue Mountain, are now using the sanctuary as an observation post to study their characteristics in an effort to learn the difference between the good and bad species.

Many people from Pennsylvania, as well as residents of Washington, D. C., New York, and New Jersey were on hand to observe the flights that day. Among the non-residents was Mrs. C. N. Edge of New York City, President of the Emergency Conservation Committee, who was instrumental in setting the large sanctuary aside for hawk protection.

The sanctuary can be reached by driving north on Route 122, turning off at Dreherstown and proceeding up the mountain. The trail is well marked and the ornithologist, Maurice Broun, and his wife are there daily to direct visitors.

On Saturday, October 3, a total of 133 birds were observed, including 95 Sharpshins, 8 Coopers, 1 Fish Hawk, 5 Sparrow Hawks, 6 Red-shoulders, 15 Red-tails, 2 Marsh Hawks and 1 unidentified species which was too far distant to record accurately.

Mr. Broun, the refuge keeper, said that on September 27, 1936, over 3600 hawks passed in one day, an inspiring sight. A similar number also was observed the same date during 1934 and 1935.

Sportsmen and others are urged to visit this excellent bird observation point. It also offers a spectacular view of the whole valley of the Schuylkill river.

Observers learn quickly to distinguish the different species and are usually on the

lookout for eagles as they majestically wing their way southward.

The large flights can usually be determined by watching the weather maps in lower Canada, New England and New York. If there are low pressure areas in those sections the birds are usually driven southward and arrive in the Hawk Mountain area two days later.

## IMPORTANT NOTICE

Circumstances have arisen whereby we are compelled to omit announcements of sportsmen's meetings, field days etc. This situation has arisen due to the fact that we can no longer depend upon a regular release date for the magazine. It is now published in Pittsburgh and there are so many problems to deal with, and the time lapse is so great, that very often the events are over before the magazine is printed. We believe our readers will agree that it is far better to discontinue this practice and instead, to report only those meetings at which constructive programs for the benefit of other sportsmen's groups are adopted.

## IN MEMORIAM

Dr. William VonBieren, 40 years President of the Branch Valley Fish, Game & Forestry Association, and Vice-President of the Federation of Sportsmen's Clubs of Bucks County, died Saturday, September 26, in Grand View Hospital, where he underwent a major operation.

Dr. VonBieren was an ardent conservationist and will be greatly missed by sportsmen of southeastern Pennsylvania.

## MAY HUNT AT TOBYHANNA

## Hunters Urged to Protect C.C.C. Boys

As a means of protection to Citizen Conservation Camp enrollees who are working in the restricted area of the Artillery Target Range at Tobyhanna, Ernest Bender, caretaker of the reservation, has issued a notice to hunters who plan to go into that area for deer this fall. The notice reads:

"Licenses to hunt on the government reservation at Artillery Target Range, Tobyhanna, Pennsylvania, will be issued by Headquarters, Third Corps Area, United States Army, Office of the Quartermaster, Baltimore, Md., on receipt of applications, to citizens of the State of Pennsylvania for the deer and game season, terminable on De-

cember 31, 1936, in the same manner in which they were issued last year. The part of the reservation upon which hunting will be authorized is that portion which lies west and south of the Lackawanna Trail (Route No. 611) and not within one (1) mile of the occupied part of the reservation, nor within one mile of the town of Tobyhanna, Pennsylvania."

Sportsmen of Portage, Cambria County, recently banded together in an effort to protect the raccoon. The new club is called the Portage Coon Protective Association with Harry Chappel, President; Jos. Oranecz, Secretary; Dr. J. H. Benko, Financial Secretary; Albert Erzal, Treasurer, and Charles Ruffing, Ray Seese and Fred Chappel, Trustees.

Their plan is to capture 'coons during the hunting season and liberate them after it closes. Two dollars will be paid to anyone who brings in a live 'coon. Any club members who kill 'coons will be given demerits and probably expelled.

## LOST BIRDS

(Continued from page 12)

hole on it. As a last resort, being sure there was no other hiding place, he had dug into this hole—and there were his two pheasants.

It is such valiant courage and habits that make all these birds "game" in the truest sense and give to their pursuit its tang of thrilling expectancy. Even after you score a clean hit you are not sure of bagging your bird. It is up to every one of us to continue our search for lost birds until we have covered every possible place of concealment, be it woodchuck hole, hollow trees or stumps, stone walls, hollows in the ground or under roots, leaves or any other possible or impossible spots, even in the branches overhead.

Nothing spoils a day more quickly for me than to lose a bird once I have hit it. I willingly spend hours looking for it and feel the time well spent. Often the most successful way of locating it is to sit quietly and listen. It is bound to move if not stone dead—certainly, if dying, it will give its last struggling kicks.

Be a sport—don't give up your lost bird too soon—the joy and relief of finding it will more than repay you.

(The End)



Constable L. Lienback of Esterly, Berks County, left, and Game Protector M. J. Golden of Reading, assisted by R. D. Parlaman, now at the training school, are keeping down the crow population in that section.



COPY OF STATEMENT

SEASONAL OCCURRENCE

COPY OF STATEMENT AS FILED WITH THE POST OFFICE SEPT. 21, 1936

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of Pennsylvania Game News, published at Harrisburg, Pennsylvania, for October 1, 1936.

Before me, a notary public in and for the State and county aforesaid, personally appeared Leo A. Luttringer, Jr., who, having been duly sworn according to law, deposes and says that he is the editor of the Pennsylvania Game News, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Commonwealth of Pennsylvania, Board of Game Commissioners, Harrisburg, Penna.; Editor, Leo A. Luttringer, Jr., Harrisburg, Penna.; Managing Editor, Leo A. Luttringer, Jr.; Business Manager, Leo A. Luttringer, Jr.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Commonwealth of Pennsylvania, Board of Game Commissioners.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) Commonwealth of Pennsylvania, Board of Game Commissioners.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting. Is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is ..... (This information is required from daily publications only.)

Signed: LEO A. LUTTRINGER, JR.  
Sworn to and subscribed before me this 23d day of Sept., 1936.

Signed: MARY E. WOMER,  
Notary Public  
(My commission expires March 7, 1939.)

SEASONAL OCCURRENCE OF FOOD BASED ON 1667 STOMACH AND FECAL ANALYSES OF SKUNKS

(The numbers indicate the frequency of occurrence in per cent.)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
No. of Analyses.....	132	91	26	65	57	81	122	153	124	139	384	293
Fruit.....	21.6	23.1	38.4	32.3	10.6	14.8	79.4	68.2	86.3	61.4	34.1	21.2
Insects.....	19.4	8.7	15.4	13.9	54.3	89.0	71.3	47.7	61.4	82.6	30.9	27.6
Mammals.....	54.4	34.0	69.2	72.1	77.0	32.7	7.3	11.9	1.6	9.4	23.7	31.0
Grains.....	16.4	46.6	39.0	1.5	.....	.....	5.8	18.6	29.1	11.3	13.8	10.4
Grasses.....	31.3	47.2	7.7	3.0	.....	.....	.....	1.3	.....	6.5	23.2	34.9
Carriion.....	22.7	40.6	34.6	6.1	.....	.....	.....	.....	.....	.....	14.2	18.3
Garbage.....	10.6	18.1	.....	.....	.....	.....	.....	.....	.....	.....	4.5	7.6
Earthworms.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.1	4.8
Birds.....	.....	.....	.....	.....	7.0	3.7	8.2	.....	2.4	.....	5.2	1.3
Reptiles, amphibians.....	.....	1.1	.....	.....	.....	.....	.....	2.0	0.8	.....	3.9	1.3

\*A visceral analysis of 70 fall and winter mink from New York shows frequency of occurrence of certain foods as follows: Mice, 32.94%; fish, 18.82%; Crayfish, 16.47%; muskrat, 14.12%; rabbits, 4.71%; insects, 7.06%; frogs, 2.36%; mole, 2.36%, and grasses, 1.18%. This analysis was made by Mr. W. J. Hamilton, Jr., of Cornell University. Mr. Hamilton also made an exhaustive study of the food habits of the skunk in New York, based on 1667 stomach and fecal analyses. The seasonal occurrence of the various foods presents an interesting picture as outlined on the accompanying chart.

FIXED CHARGES PAID ON STATE GAME LANDS AND GAME FARMS IN LIEU OF THE TAXES FOR YEAR 1936

County	Amount Paid for County Purposes	Number of Townships	Amount Paid for Road Purposes	Amount Paid for School Purposes
Armstrong.....	\$ 13.03	2	\$ 26.06	\$ 26.06
Bedford.....	257.65	14	520.94	555.70
Berks.....	64.76	9	129.52	129.52
Blair.....	32.34	4	64.69	64.69
Bradford.....	327.42	6	509.71	654.82
Bucks.....	13.90	3	27.81	27.81
Butler.....	10.43	2	20.85	20.85
Cambria.....	67.84	4	135.69	135.69
Cameron.....	118.88	1	237.76	237.76
Carbon.....	19.49	1	38.98	38.98
Centre.....	204.92	7	409.81	409.81
Chester.....	9.06	1	18.12	18.12
Clarion.....	119.47	8	238.96	238.96
Clearfield.....	191.83	10	383.66	383.66
Clinton.....	93.45	2	190.92	190.92
Columbia.....	109.66	8	219.31	219.31
Crawford.....	35.72	4	71.43	71.43
Elk.....	456.49	7	912.97	912.97
Erie.....	13.30	5	26.60	26.60
Fayette.....	72.56	3	145.12	145.12
Forest.....	70.57	2	141.14	141.14
Franklin.....	23.76	1	47.51	47.51
Fulton.....	84.96	5	169.90	172.66
Huntingdon.....	86.93	12	212.01	223.42
Indiana.....	1.00	1	2.00	2.00
Jefferson.....	226.31	7	452.63	452.63
Juniata.....	37.53	3	75.06	75.06
Lackawanna.....	15.00	1	29.99	29.99
Lancaster.....	28.66	3	57.32	57.32
Lawrence.....	3.25	1	6.50	6.50
Lebanon.....	26.71	2	53.42	53.42
Luzerne.....	67.56	2	135.13	135.13
Lycoming.....	224.27	6	448.56	448.56
McKean.....	206.34	3	412.67	412.67
Mifflin.....	20.78	4	41.53	41.53
Monroe.....	48.79	4	97.58	97.58
Montour.....	2.28	1	4.55	4.55
Montgomery.....	3.28	1	6.56	6.56
Northumberland.....	50.48	4	100.97	100.97
Perry.....	35.83	2	71.67	71.67
Pike.....	16.78	2	33.57	33.57
Potter.....	121.78	6	243.54	243.54
Schuylkill.....	46.32	7	92.63	92.63
Somerset.....	104.55	7	209.11	209.11
Sullivan.....	399.08	6	798.18	798.18
Susquehanna.....	67.44	3	134.89	134.89
Tioga.....	42.63	3	85.26	85.26
Venango.....	150.10	11	300.20	300.20
Warren.....	200.64	5	401.31	401.31
Washington.....	23.10	2	46.19	46.19
Wayne.....	22.79	1	45.57	45.57
Westmoreland.....	46.06	1	92.12	92.12
Wyoming.....	246.53	3	493.05	493.05
York.....	7.61	2	15.21	15.21
Totals.....	\$4,993.90	225	\$9,886.44	\$10,080.18

Total amount paid in lieu of taxes—\$24,960.82



# 1936 Seasons and Bag Limits

## 9:00 o'clock hunting on First Day Only

Below is a summary of open seasons and bag limits provided by State and Federal statutes and by resolution of the Board of Game Commissioners, under date of July 1 and 2, 1936, as provided under authority of Section 509 of the Game Code as amended. The open season includes both dates given, Sundays excepted, the small game and trapping seasons, except waterfowl, beginning at 9 A.M. on the first day of the general open season, and the opening day of the muskrat and beaver seasons.

UPLAND GAME (Small game possession limit 2 days' bag)	BAG LIMITS	OPEN SEASONS
Day	Season	
*Wild Turkey (See counties closed below)	1	1
Ringneck Pheasants, male only	2	8
Ruffed Grouse	2	8
Bobwhite Quail, Gambel Quail, Valley Quail (the combined kinds)	4	20
Blackbirds	Unlimited	
Rabbits, Cottontail	4	20
Squirrels, Gray, Black and Fox (the combined kinds)	6	20
Squirrels, Red	Unlimited	Nov. 6-Aug. 15, 1937
Raccoons, all counties, by individual or hunting party	2	10 } Nov. 6-Dec. 31
Bear, over one year old, by individual or hunting party	1	1 } Nov. 23-Nov. 26
Deer, Male with two or more points to one antler	1	1 } Dec. 1-Dec. 12
Deer, Male as above, by hunting party	6	6 }

**NO OPEN SEASON**—Hares (Snowshoe or Varying), Reeves Pheasants, Hungarian and Chukar Partridges, Elk, Antlerless Deer, and Cub Bears

MIGRATORY GAME (Possession limit one day's bag)		
Rails, except Sora	15	Unlimited
Sora	25	Unlimited
Gallinules	15	Unlimited
Woodcock	4	20
Suipe, Wilson or Jack	15	Unlimited
Wild Ducks (See protected species below)	10	60
Wild Geese (Brant closed)	4	30
Coots or Mudhens	15	Unlimited
		Sept. 1-Nov. 30
		Oct. 15-Nov. 14
		Nov. 1-Nov. 30

The species of waterfowl on which there is no open season are Red-head Ducks, Canvasback Ducks, Wood Ducks, Ruddy Ducks, Buffle-heads, Swans, Snow Geese and Atlantic Brant. No baiting or live decoys.

Magazine shot guns limited to three shells at one loading.

**A FEDERAL DUCK STAMP IS REQUIRED OF EVERY MIGRATORY WATERFOWL HUNTER MORE THAN SIXTEEN YEARS OF AGE. STAMPS ARE ON SALE AT POST OFFICES.**

### HUNTING METHODS AND RESTRICTIONS FOR TAKING MIGRATORY BIRDS

Migratory game birds may be taken with shotgun only, not larger than 10-gauge. Repeating shotguns to hold not more than three (3) shells. The magazine may be cut off or plugged with a one-piece metal or wooden filler incapable of removal through the loading end, to reduce the capacity of the gun to three (3) shells at one loading.

Use of blinds and aid of dogs permitted.

The use of live decoys and sinkboxes and use or aid of any automobile or aircraft of any kind is prohibited.

Any boat or floating craft propelled by hand power is permitted, but the use of any power boat, sailboat or other boat under sail, and any craft or device of any kind towed by power or sailboat, is illegal.

No baiting of waterfowl is permitted.

No aircraft, power boat or floating device of any kind may be used to concentrate, drive, rally, or stir up waterfowl.

Waterfowl and coots may be hunted between 7 A. M. and 4 P. M. standard time, only. On all other migratory game birds in season, including rails, snipe, woodcock, etc., shooting is permitted between 7 A. M. and sunset, except on November 6, when hunting for such birds is not lawful before 9 A. M.

Migratory game birds may not be possessed longer than ten (10) days after close of the season.

### FUR-BEARERS (Traps not to be set before 9 A.M. the first day)

Minks, Opossums, Skunks	Unlimited	Nov. 6-Feb. 28, 1937
Musk rats (by trapping only)	Unlimited	Dec. 1-Mar. 15, 1937
Beavers (by trapping only)	3	Mar. 1-Mar. 15, 1937

### NO OPEN SEASON—Otters

\*No open season on Wild Turkeys during 1936 in Berks, Bradford, Bucks, Cameron, Carbon, Clarion, Clearfield, Danphin, Elk, Fayette, Forest, Jefferson, Lackawanna, Lebanon, Lehigh, Luzerne, Lycoming, Monroe, Northampton, Pike, Potter, Schuylkill, Tioga, Warren, Wayne, Wyoming and York Counties.

### GROUPS HUNTING SMALL GAME

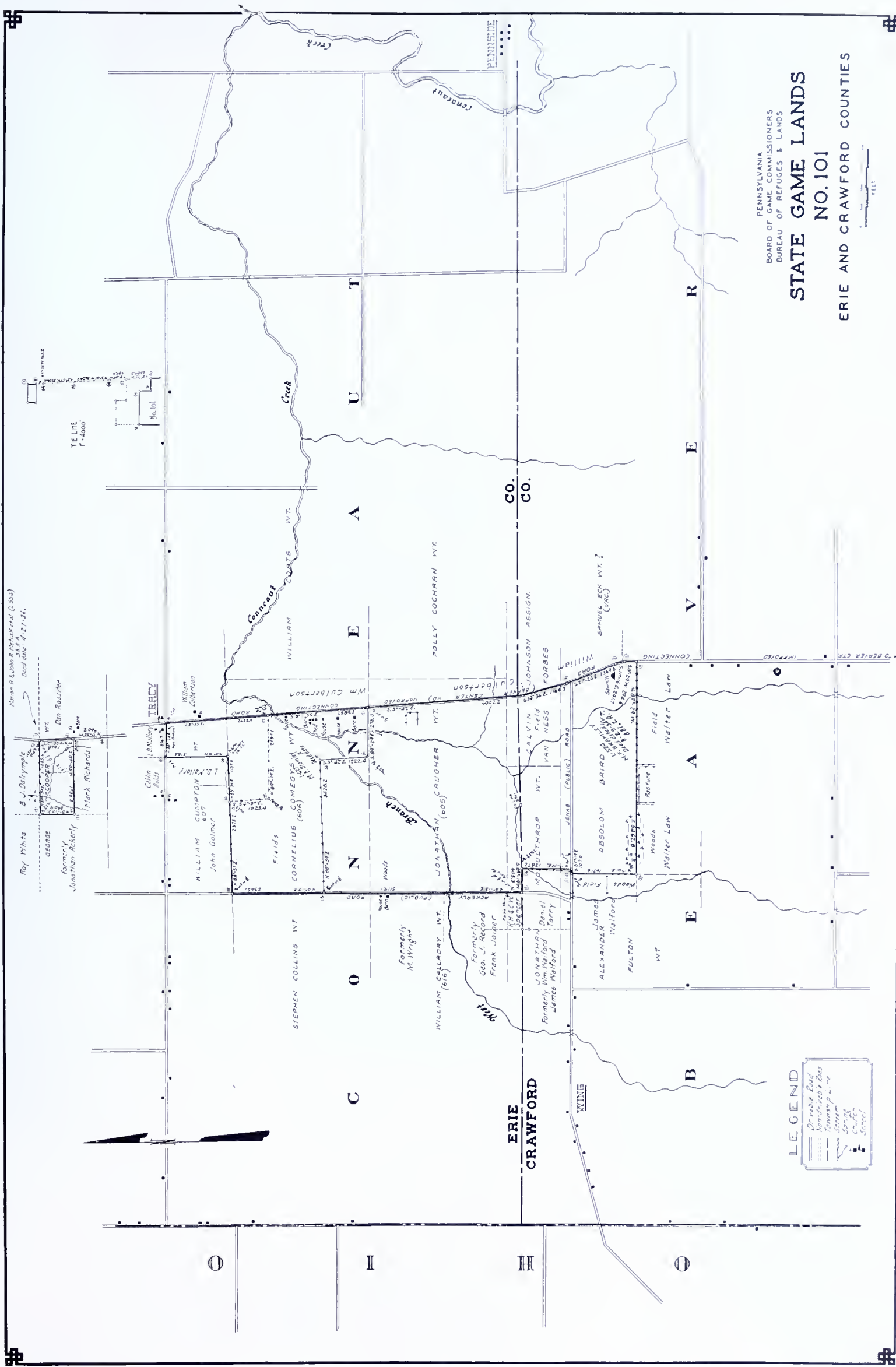
In the interest of safety, the Commission recommends that parties hunting small game be limited to five (5).



### QUESTIONS AND ANSWERS

- Q. May a person hunt on his own land without a license?
- A. Yes, in season, any owner or lessee of land, members of his family or employees who reside upon and help cultivate the land, may hunt thereon without securing a license. To hunt on adjoining lands the permission of the landowner must be secured.
- Q. May a person under the age of 14 years hunt?
- A. No.
- Q. May a person train dogs with a gun or rifle?
- A. No. Guns must not be carried when training dogs.
- Q. May traps be set in holes?
- A. Traps should not be set in dens inhabited by game.
- Q. May a target for practice be placed on a tree?
- A. No. Shooting into live trees is absolutely prohibited.
- Q. May a hunter have more than two days' bag limit of game in his possession?
- A. No. He may not possess more than two days' bag limit, which includes 8 rabbits, four grouse, 1 turkey, 12 squirrels of the combined kinds, 8 quail, and 4 ring-neck pheasants.
- Q. What is the possession limit for migratory game?
- A. One day's bag limit.
- Q. If three persons are hunting together for deer is a roster necessary?
- A. Yes. One of the three must carry a roster.
- Q. May a hunter continue to participate in the drives for deer after he has taken one?
- A. Yes, providing he doesn't go on the watch or stand.
- Q. Suppose a party of hunters divide their kill of game birds, so each will have his two days' bag limit. Would that be legal?
- A. Absolutely no. It is a violation for which severe penalties can be imposed.
- Q. How heavy is a duck?
- A. According to the American Wildlife Institute, mallards average 2 lbs. 15 oz., canvas backs 2 lbs. 8¾ oz., red heads and pintails 2 lb., widgeons 1 lb. 10 oz.
- Q. What would happen if the hunter were not aware of the ruling that the season does not start until 9 A. M., and he shot game?
- A. Ignorance of the law is no excuse, and the Game Commission will have the case thoroughly investigated.
- Q. Is it unlawful to hunt in groups of more than five?
- A. No, but the Board of Game Commissioners does not favor large groups of hunters combing the fields, at least, for small game.
- Q. When were the first ringneck pheasants released in Pennsylvania?
- A. The Game Commission released the first ringnecks in 1913.





PENNSYLVANIA  
BOARD OF GAME COMMISSIONERS  
BUREAU OF REFUGES & LANDS

# STATE GAME LANDS

## NO. 101

ERIE AND CRAWFORD COUNTIES

**LEGEND**

- Drainage Basin
- Non-drainage Basin
- Township Line
- Section Line
- County Line
- State Line

Minor R. & John R. McArthur (L. 554)  
Died date 4-27-34.

TIE LINE  
T-4800

**ERIE  
CRAWFORD**



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THE LAW





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# Pennsylvania Game News

Vol. VII · December · 1936 · No. 9

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116



# PENNSYLVANIA GAME NEWS

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Your local Game Protector, County Treasurer or sporting goods store will take your order or you may write direct to the Game Commission at Harrisburg, Pa.

Notify the Editor immediately of any change of address. Such promptness on the part of the subscriber will greatly facilitate the handling of the NEWS.

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## 1936 IN REVIEW

AS we approach the close of the year 1936, it is appropriate to review the progress made by the Board of Game Commissioners during the past year. Below are a few of the highlights:

**The Hunting Season**—As announced in recent GAME NEWS editorials, the Game Commission was compelled to take drastic steps both to conserve the game supply and to reduce the number of hunting accidents. As this editorial is written, the first few days of the 1936 small game season are behind us, and we are proud of the way Pennsylvania's nimrods have comported themselves.

Our earlier predictions on the game supply have been fully borne out, and our sportsmen generally have killed game with moderation. Squirrels and quail were found scarce throughout the entire State. The only localities where squirrels were present in reasonable abundance were those where winter conditions were less severe, or where ample feeding arrangements had been made long before the heavy snows descended. Rabbit conditions have been found spotty—in some localities good, in others only fair or very poor. Ruffed grouse were scarce in some sections of the State, with fair numbers in others. Ringneck pheasants on the other hand were reported more abundant throughout all of the good pheasant territory than usual, largely due, no doubt, to the extensive stocking program last spring.

Anticipating another hard winter, employees of the Game Commission interested sportsmen's organizations, landowners, and others have already made extensive feeding plans for this coming winter.

**Hunting Accidents**—The Game Commission's efforts to reduce hunting accidents by delaying the opening of the small game season until 9 A. M. on the first day has been fully justified, according to early returns from the field. For example, on the first day of the 1935 season four men were killed and eighty-six injured. During the first day this year, according to preliminary reports, only two hunters lost their lives and approximately thirty-five were injured, a reduction of fifty per cent.

The 9 o'clock opening hour was exceptionally well observed everywhere. In a few localities, however, arrests had to be made because hunters were unwilling to cooperate. Many hunters have already expressed the hope that next year the Commission may see fit to start the shooting day at a fixed hour every morning.

**Farm Game Program**—The two types of experimental farm game units which were in operation this year seem to have met with favor among the sportsmen who had an opportunity to become acquainted with them. One of these units consisted of 1200 acres in Chester County, where the landowners gave the Game Commission exclusive control over the hunting rights for a term of ten years. A number of small refuges were created, the balance left open to hunting. Safety zones were posted around the farm buildings. These lands in former years were closed to general hunting under the trespass law.

Two other farm cooperative projects, one in Lehigh County and one in Indiana County, were set up on almost identically the same basis as the one in Chester

County, but the number of hunters on each of these units was limited by special permits, issued by the landowners in the order in which hunters applied. The hunters at the end of the day reported their kill. These two projects were set up primarily to ascertain how much game a given territory of intermixed farm land will produce if properly managed.

In a later issue of the GAME NEWS a complete story on each of these two types of cooperative farm game projects will be explained fully, with the results obtained. Early reports indicate that some very useful information will result from these experimental units, which the Commission hopes to use in the development of a more efficient farm game program.

**New Hunting Licenses**—The improved hunting license developed for the 1936 season has met with universal approval. It has reduced to a minimum the cheating which occurred in former years when resident hunting licenses were secured by persons not entitled to them. The large game tag, issued as part of the license for the first time in Pennsylvania, will assist all the deer and bear hunters to tag their trophies promptly and aid the Department in the collection of vital field statistics. The new card for all hunters to use in reporting their annual kill immediately after the close of the season also will aid both the sportsmen and the Department. **Impress upon your friends the need for sending in these reports immediately after the season closes.**

**Game Land Purchases**—During the year 1936 the Game refuge and Public Hunting Grounds Program was expanded and a new program of intensive management was launched to increase game production, especially small game, on Pennsylvania's State Game Lands and Refuges. A total of 25,290 acres, distributed throughout 14 counties, were conveyed to the Commonwealth from January 1 to November 1, bringing the total acreage of State Game Lands up to 516,608 acres. By intensive management of these game lands the Commission hopes to increase the annual game crop materially.

**Additional Refuges**—During 1936, 23 Primary Game Refuges, totalling 3977 acres, and 1 Auxiliary Game Refuge, totalling 200 acres, were established, many of them in small game territory. The small refuge program was launched several years ago, principally in wild turkey country, to assure a larger future annual supply of these popular game birds, as well as other small game. The size of many of the larger refuges heretofore maintained has been reduced during the year, and steps have been taken to handle the entire refuge program under an efficient group management plan.

**Pymatuning Waterfowl Refuge**—During the year further improvements of the Pymatuning Waterfowl Refuge, set aside within the past two years on the Pymatuning Reservoir in Crawford County as an important unit in the international system of waterfowl breeding and feeding grounds, were launched. Hundreds of ducks nested there this year and many thousands stopped to rest and feed among the marshes during the spring and fall migrations.

(Continued on page 16)





WHEN GAME NEEDS FOOD



# THE PENNSYLVANIA BOUNTY SYSTEM

*A Detailed Study of its History, Operation, Cost and Effects, together with a Discussion of the Advisability of its Continuance.*

By RICHARD GERSTELL



*Editor's Note: This is the first of two installments of a report on Pennsylvania's Bounty System. The second will appear in a later issue.*

## Introduction

The control of certain species of birds and mammals commonly classed as predators has for several centuries been considered one of the most important phases of game administration as generally applied both in the United States and in Europe.

The recent trends toward scientific game research and the practical application of management principles derived therefrom have clearly shown that even today extremely little is known either about the many highly complex inter-relationships extant between the innumerable members of both the plant and animal kingdoms or of the development of environmental conditions most favorable to their welfare.

Accordingly, it is as yet impossible to prove that any system of general predator control can properly be included in a sound and comprehensive wildlife management program.

It appears, however, that some form of control must be exercised to a degree under certain conditions, so the problem now confronted is to discover the best and most economical methods to be employed in such work once the need has definitely and quantitatively been proven.

To those interested in wildlife conservation, Pennsylvania's bounty system is well-known.

Whether right or wrong, a constant policy regarding the system has for many years been rigidly adhered to within the Commonwealth. It is, therefore, possible by a careful study of the records to discover some of the advantages and disadvantages to be derived from the operation of a state-wide bounty program over a relatively long period.

The purpose of this report is to make known the facts disclosed by a study of the payment of bounties in Pennsylvania, and, by placing particular emphasis on the results obtained during the last twenty years of the system's operation, to discuss the advisability of the continuance of present policies.

## History

In Pennsylvania the payment of bounties for the destruction of certain species of predatory birds and mammals dates back to the year 1683, a period of over two hundred and fifty years.

During these two and one-half centuries, public monies have been constantly paid for the killing of one or more species. At first, payment was made in English currency as the transaction was then a governmental activity carried out by American representatives of the British Crown. The Commonwealth assumed the obligations soon after the signing of the Declaration of Independence and payment in American dollars was made as early as 1802.

From the inauguration of the Pennsylvania bounty system in the latter part of the seventeenth century until



the year 1724, rewards were paid only for the killing of wolves. Then red foxes were added to the list. In 1749 squirrels, the ground and flying species excepted, were included in the predator classification and a bounty of three pence was placed upon their heads.

All through the nineteenth century there were constant changes both in the predator classifications and bounty rates as well as in the list of counties offering bounties. The panther appeared on the records in 1807 and the wildcat followed in 1819. The mink was placed on the lists in 1841, while skunks and grey foxes were classed as vermin under the laws of 1868. The famous Pennsylvania "Scalp Act" was instituted in 1885. It provided for the payment of a fifty-cent bounty for the destruction of all species of hawks and owls except the Acadian, screech and barn varieties. In that same year the weasel first appeared on the lists at a premium of fifty cents. The Scalp Act of 1885 was repealed in 1887. Such action is commonly claimed to have been taken because the widespread slaughter of hawks and owls was supposed immediately to have resulted in an overwhelming increase in the population of rats and mice which "wrought untold havoc throughout the State." It appears, however, that repeal was actually induced by the innumerable frauds perpetrated under the Act.

General revisions of the bounty laws occurred in 1889, in 1897, and again in 1907, while legislation enacted in 1913 radically changed the bounty picture.

In that year, the Resident Hunter's License Law was placed in effect. Under the provisions of the act, it became necessary for all gunners, excepting those residing upon or cultivating the soil, to purchase a license to hunt within the Commonwealth. It was stipulated that all fees collected through the sale of such licenses should constitute the Pennsylvania Game Fund which should be separately maintained solely for the purpose of administering the game resources of the State. Furthermore, it was decreed that one-half the sum annually deposited to the credit of the Game Fund should be set aside for the payment of bounties.

The 1913 Law fixed a fifty-cent reward for the destruction of goshawks, sharp-shinned hawks and great horned owls in addition to higher premiums on certain mammals. The County Treasurers, upon the approval of the County Commissioners, paid the bounties based on claims passed by the Justices of the Peace and were later reimbursed from that half of the Game Fund "earmarked" for the purpose.

Widespread and almost unbelievable frauds soon brought about the repeal of the 1913 Bounty Law. It was supplanted by the Act of April 15, 1915 which forms the basis of Pennsylvania's present bounty system.

The Act of 1915 provided that representatives of the Game Commission should be responsible for the payment of bounties and that all expenses incurred thereby should be drawn solely from the Game Fund.

The last mentioned provisions completed the evolutionary history of the bounty system within the Keystone State. Inaugurated chiefly for the protection of personal property, such as poultry and live-stock, the bounty purpose had begun to change shortly after the middle of the nineteenth century, and the legislation of 1885 clearly stated that one of the purposes of payment was the control of predators for the protection of game. While the Act of 1913 provided that one-half the money derived from the sale of hunting licenses should be set aside for the payment of bounties, the 1915 legislation placed the entire responsibility for bounty payments upon the Game Commission, thus definitely establishing the fact that the present bounty system is solely a game management agency.

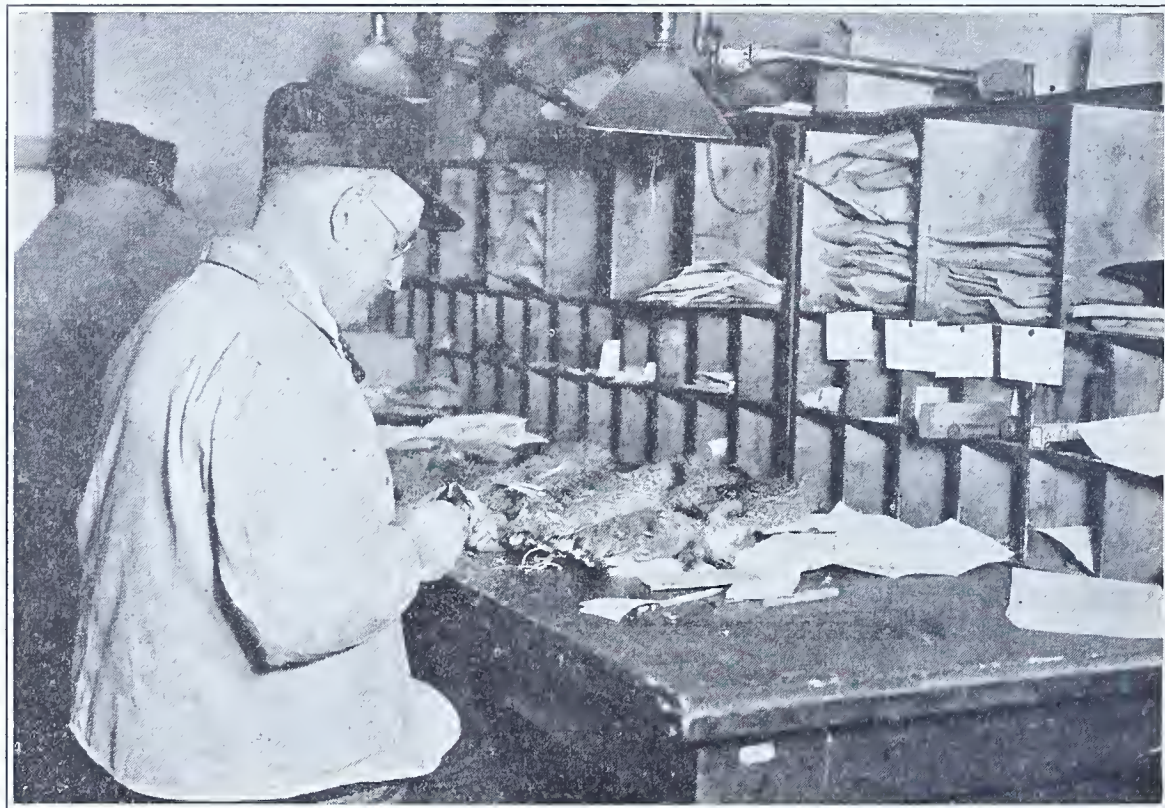
The 1915 Act provided for the payment of bounties for the killing within the Commonwealth of the following species at the rates shown: Each wildcat, \$6.00; each red fox, \$2.00; each grey

fox, \$2.00; each mink, \$1.00; and each weasel, \$1.00. In 1919 the bounty on wildcats was raised from \$6.00 to \$8.00 and that on weasels from \$1.00 to \$2.00. In 1921 the weasel fee was reduced to \$1.50 and the mink was removed from the bounty list. During 1923 wildcats were raised to \$15.00 and grey foxes to \$4.00, while weasels were further reduced to the original sum of \$1.00. Beginning 1929 the red fox was removed from the bounty list, while a \$5.00 premium was placed on goshawks killed between November 1 and May 1 following. Thus, the present bounty rates have come to be as follows: Each wildcat, \$15.00; each grey fox, \$4.00; each weasel, \$1.00; and each goshawk killed within the prescribed time limits, \$5.00.

Such, in brief, is the history of the Pennsylvania bounty system.

#### *Method of Operation*

Although the Act of April 15, 1915 forms the basis of the present Pennsylvania bounty system, many of the current details were not finally worked out until several years later. It is however, not important to know the detailed evolution of the practices now in use, and, accordingly, the following paragraphs will



**Splitting fox noses to prevent their being probated again.**

contain only a brief outline of the procedure now in vogue without entering into a discussion of its development.

Any resident of the Commonwealth, or any non-resident being duly possessed of that form of hunting license especially issued to such individuals, may upon killing one or more of the various species of animals carried on the bounty lists, lay claim to and receive bounty payment for the destruction of said animal, or animals, by proceeding along the following lines.

First, the animal, or animals, or its properly skinned hide, or hides, must by the killer be taken before a Justice of the Peace, District Game Protector or other person duly entrusted with the power of administering legal affidavits. Before said officer, and on specially prepared blanks the killer must make and sign a sworn affidavit stating the number and species of animals presented for bounty payment, the name of the township and county wherein the animal, or animals, was taken and the date of the kill, or kills. To said affidavit the officer administering the oath must affix both his signature and official seal.

The skin, or skins, of the animal, or animals, must then be forwarded together with a properly executed affidavit to the Pennsylvania Game Commission, Bureau of Predatory Animal Control, Harrisburg, Pennsylvania.

Said skin, or skins, in conjunction with the affidavit constitutes



a bounty claim. To fully comprehend the details of this report, the fact must be borne in mind that a single bounty claim may cover the killing of one or more specimens of one or more species of animals.

Upon receipt of the claim, employees of the Bureau of Predatory Animal Control thoroughly inspect the same. If all details are in proper order, the hide, or hides, of the animal, or animals, presented is split with a sharp knife from a point midway between the eyes forward and downward through that portion of the skin which originally covered the nasal cartilage. The pelt is then returned, postage prepaid, to the claimant, while a check for the amount due is mailed promptly thereafter.

The Game Commission keeps on hand for permanent record all affidavits filed in claim for bounty. These, together with copies of the checks mailed, constitute a complete and accurate set of bounty statistics.

Cost

In any detailed consideration of the cost of the Pennsylvania bounty system, it is imperative that the reader thoroughly understand that two types of expenditures are involved.

The first is the actual amount directly expended for bounty payments which is represented by the totals of the checks written. The second is the administrative expense involved in making the payments, including salaries, wages, postage and other items connected with passage of the claims.

For the sake of clarity, throughout this report the expenditure first mentioned above will be referred to simply as the cost, and the second as the administrative cost.

It will be noted that in most instances total figures herein presented are given in round numbers. This is due to the fact that since an animal may be killed toward the close of one fiscal year and payment on the same may not be made until the beginning of the next fiscal year, it is not always possible to annually check dollar for dollar against each animal killed. Such totals are expressed as the hundred next lowest to the actual figure in question.

1. Totals for Twenty Years

The total cost of the payment of bounties during the twenty-year period from April 15, 1915 through May 31, 1935 was \$1,880,290.00.

A breakdown by species showing percentages is as follows:

Species	Total	Percentage
Goshawks (6 years).....over	\$ 2,220.00	0.1%
Mink ( 6 years)..... "	26,200.00	1.4%
Red Foxes (14 years)..... "	112,300.00	6.0%
Wildcats (20 years)..... "	78,300.00	4.2%
Grey Foxes (20 years)..... "	451,100.00	24.0%
Weasels (20 years)..... "	1,209,500.00	63.3%
Grand Total .....	\$1,879,600.00	

The total administrative cost for the same period was approximately \$180,000.00. It is not possible accurately to determine this figure to the dollar because there are in the records many charges shown against the Bureau of Predatory Animal Control which are not directly connected with bounty payments. Among such activities is the live-trapping and redistribution of beavers which had in certain areas become so numerous as to cause excessive property damage. Only those expenditures directly connected with the bounty payments are included in the administrative costs herein listed.

In summation, it will be noted that the total sum expended in the operation of the Pennsylvania bounty system from 1915 through 1935 was approximately \$2,060,290.00.

2. Annual Figures

The average annual cost of bounty payments for the twenty-year

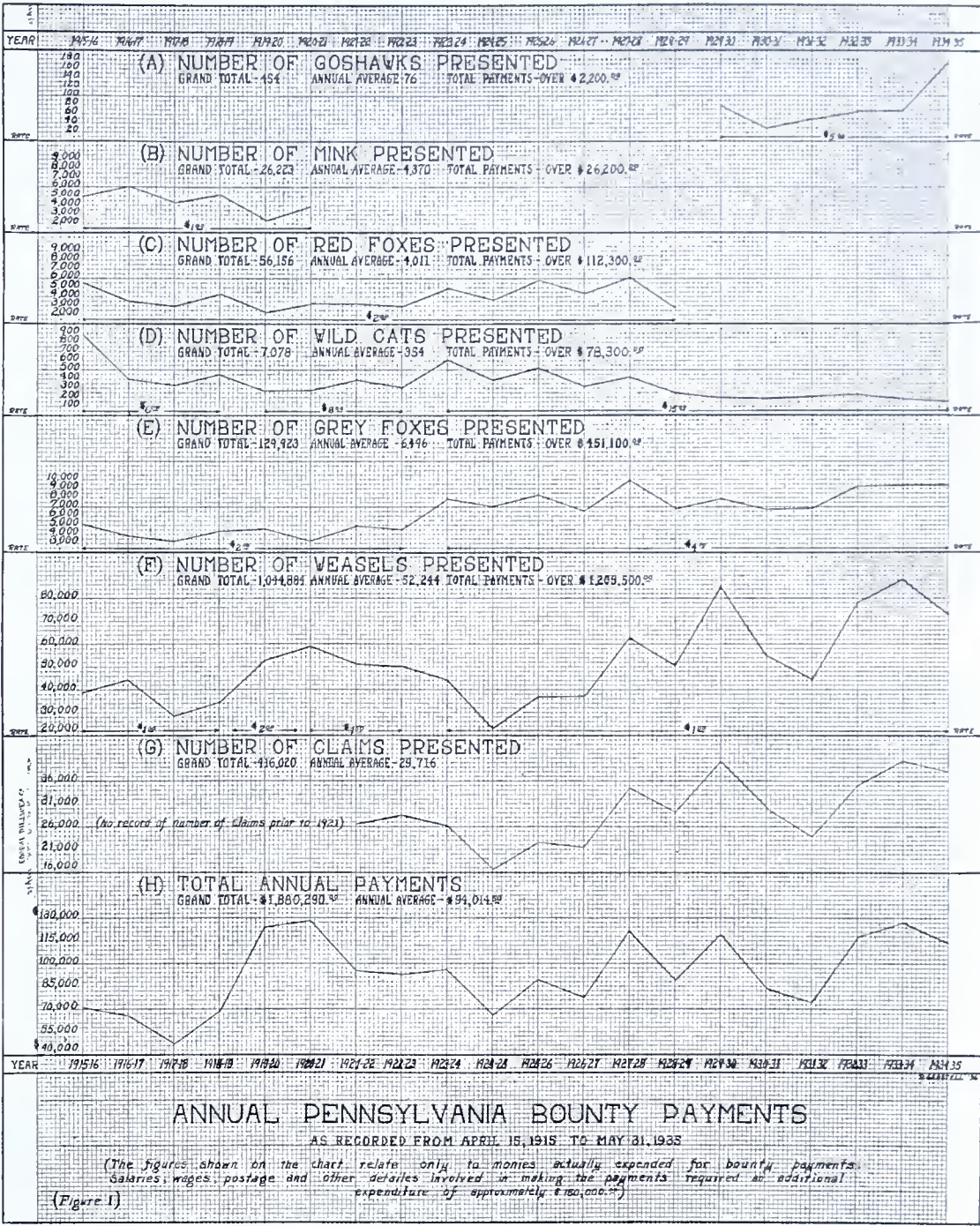


Figure 1

period last mentioned was \$94,014.50. The greatest single annual payment was \$128,299.50 in the fiscal year 1933-34, while the lowest was \$47,089.00 paid in 1917-18.

The twenty-year average is most nearly approached by the 1922-23 payment, which totalled \$93,662.00. The 28,545 claims presented that year contained the following species in the number and percentages indicated:

Species	Number	Rate	Total	Percentage
Wildcats .....	351	\$8.00 each	\$ 2,808.00	3.0%
Red foxes .....	2,991	2.00 "	5,982.00	6.4%
Grey foxes .....	4,530	2.00 "	9,060.00	9.7%
Weasels .....	50,548	1.50 "	75,812.00	80.9%

Total ..... \$93,662.00

The annual average administrative cost from 1915-1935 was approximately \$9,000.00. The figure for the "average" year 1922-23 was \$9,637.60 which may be itemized as below:

Salaries and wages.....	\$7,345.50
Postage .....	749.20
Traveling expenses .....	693.50
All other expenses .....	849.40

Total .....\$9,637.60

(Continued on page 16)



# FORESTS AND WILDLIFE



By W. L. McATEE

**T**HE general impression is that the Eastern United States, at the time of the coming of the white man, was covered by an unbroken forest in which wildlife abounded. Ecologists know that there is something wrong with that picture; either the forest had openings or wildlife was not abundant. It is probable that enthusiastic statements as to the number of deer, bison, and other animals must be thought of in relation to the scanty human population of the period. Then there seemed a wealth of game for every hunter, but certainly as people increased game dwindled.

## *Open Forests*

Nevertheless, there were in the beginning large aggregate numbers of the kinds of wildlife of most interest to man, and this must be taken as an important basic fact in connection with the appraisal of reports on the nature of the forest. Biologists know that an open type of woodland supports more wildlife than a dense forest. Giving weight to history as to the abundance of wildlife in colonial days, they must conclude that the woods were open or that they embraced a fair proportion of open areas.

The primeval forest, of course, was

mature; more than that it was over-mature. Such a forest is not dense like second-growth, but contains openings made by the toppling over of senile woodland giants, by windfalls, and by the killing of trees by lightning or by fires caused by lightning. Moreover, in such a forest the tree trunks are, in general, well spaced, permitting a fair degree of light to reach the ground.

From both direct and indirect evidence, we know that there were openings in the great eastern forest. The meadows of the northeast, the "glades" of the central mountain region, and the "balds" of the southern Appalachians are topographic features known to have been present in those days. There must have been marshes or there would have been no muskrats or redwinged blackbirds; there surely were open grasslands or savannas or there would have been no meadowlarks, or

sparrows of the grasshopper, Savannah, or Henslow's type. Beavers were numerous and widely distributed; their dams make pools which fill in and form meadows, the beavers thus being driven to other areas where they form new ponds that make more meadows.

So considering all these facts, when we read of the bison once being rather numerous in Pennsylvania, we envision it as an inhabitant of open woods, and of stream valleys, marshes, meadows, and other places not densely clothed with trees. Toward the end of its existence in Pennsylvania (last herd slaughtered, 1779, Snyder County; last individual killed, 1810, Northumberland County), the bison was forced by persecution into wild retreats, but normally, we may be sure, it inhabited fairly open tracts. We are informed that it fed principally on "cane"—no doubt a coarse grass or sedge—a plant of the ground cover, and one requiring at least fair light for its growth.

## *Pennsylvania's Game*

Pioneer tales of the abundance of wildlife, in general, surely indicate that the eastern forest was, in part at least, an open, rather than a continuously dense stand, or at least that it had plenty of openings. Only



Shadbush or June Berry, a good early producer of relished fruit



Elderberry, a prolific bearer of a summer fruit eaten by almost all kinds of wildlife



such woodland could provide the ground vegetation necessary for the upkeep of bison, elk, deer, and turkeys in the numbers claimed to exist in the early days.

All of this is introductory to saying that dense forests are usually overrated as nurseries for wildlife. They are the natural home of certain species, and they are important but they do not have the surpassing importance sometimes claimed for them. As to furs, we are informed by Dr. W. J. Hamilton of Cornell University that 80 per cent of the New York catch comes from farms. Conditions are so similar in Pennsylvania that a like condition no doubt prevails. Over the United States, in general, the various species of quail and rabbits undoubtedly exceed all other game in the head taken, and, except the snowshoe hare, none of them are forest species.

The situation as it prevails in Pennsylvania today can readily be appraised. Analysis of the reported head of game taken in the State in 1935 (see accompanying table) shows that only 37 per cent can fairly be classed as forest game. The large majority (62 per cent) comes from fields, marshes, beaches, and water surfaces, that is from open places.

The Pennsylvania game kill for 1935 includes the following forest and non-forest species; Forest—Deer, 70,470; bear, 402; varying hares, 8,659; squirrels, 1,193,856; turkeys, 4,498; raccoons, 33,579; grouse, 190,955; woodcock, 36,856; a total of 1,539,275 pieces or 37.31 per cent.

Non-forest species include—Rabbits, 1,971,505; pheasants, 281,000; quail, 217,247; ducks, 20,456; shorebirds, 12,390; blackbirds, 83,920; a total of 2,586,518 pieces, or 62.69 per cent.

All the animals here classed as forest game require ground growth for their sustenance and 6 of the 8 groups depend upon it almost exclusively; they must get it from open places. To maintain the proportionate head of forest game in the Pennsylvania bag requires maintenance of the 1935 wildlife feeding capacity of the forested lands, and to increase it demands improvement.

Wildlife does best along forest margins, in openings, or in brushy growths. In the second growth and other cut-over types we have today, the ceaseless surge of all vegetation tends to modify, and even to eliminate, conditions favorable for wildlife. Hence to keep the present stock or to increase it requires active effort tending to offset the constant, omnipresent pressure of vegetative growth.

### *Scattered Cuttings*

Scattering cutting areas as widely as possible, and selective thinning and stand improvement work are existing forest practices that may be employed to improve carrying capacity for wildlife. Extensive mechanical brush-cutting and spot-burning are practices, used in the southeast but untried here, that may have to be adopted where wildlife production is the principal objective, as it should be on State Game Lands.

Where one sees the "deer line," as one may in many Pennsylvania forests, there are either too many deer or not enough feed. The situation can be adjusted either by reducing the deer population or by increasing



**Aspen: one of the best browse plants**



**Common Juniper provides excellent cover and a year-round supply of fruit**

the food supply. Which solution is preferable will have to be decided in each case, but on the State Game Refuges, it would seem that alterations should always be in favor of the deer, in other words, that the carrying capacity should be kept at the maximum and utilized as far in that direction as compatible with a liberal margin of safety.

Some of the suggestions made by the writer as to wildlife management resulting from a study of State Game Lands in Centre County in 1935 are as follows:

This is an involved question but the essential facts with respect to a generally forested region are contained in the following statement. Recently burned or cut-over tracts, that is areas where ground vegetation has full light, harbor maximum populations of wildlife. Every subsequent growth

stage insofar as it is accompanied by suppression of low vegetation has diminished carrying capacity for wildlife. Forest, especially in dense stands, shades out low vegetation including essential cover as well as the most important browse, fruit, and seed-producing species, hence is almost a desert for many forms of wildlife.

In chiefly forested lands, therefore, where the production of game and other wildlife is the primary object, the first duty of the wildlife manager is to preserve the openness of existing satisfactorily open areas and to open radically woodland tracts where the canopy now is suppressing or has suppressed shrubby and herbaceous vegetation.

Specifically systems of fire lanes may be installed, the lanes being made much wider than in ordinary forestry practice, say up to

(Continued on page 8)



# FORESTS AND WILDLIFE

By W. L. McATEE

(Continued from page 7)

a hundred feet, and then kept fairly clear by brushing operations as frequently as may be required.

On lands primarily for game, the forest canopy should be opened so that areas of one or two acres in every 10 to 12 will admit enough light to permit restoration of the ground cover. This vegetation will volunteer as soon as light is available but its advent may be hastened by disking the land after partial or complete clearing.

Fire lanes and slashings may be made quickly by the use of a heavy tractor and brush-cutter, the litter being burned later when sufficiently dry. Advance preparation of wide fire lanes, the services of an ample crew of men, and choice of conditions under which only slow-burning is possible are necessary if burning is to be kept under adequate control, which is all important.

If continued provision of work for many men is an objective, the vegetation of cut-over and burned-over tracts as well as that in fire lanes may be kept at any desired stage by systematic cutting with brush hooks. In such operations sparing valuable species that do not make fruit until they have reached a certain height would be advisable.

## *Releases Essential*

A perennial process of selective thinning would go far toward making Centre County game lands more productive of wildlife. For instance it would pay to "release" every wild apple tree, cutting down any competitive growths so that the apples will have all the light they need to produce full crops of the leaves, buds, and fruit that are so valuable to wildlife.

A degree of preferential treatment is justifiable also in the case of hawthorns, and some of the superabundant oaks can well be removed so that shadbushes and dogwoods will receive the light they require for healthy growth and production of good crops of fruit. Among the most valuable of other fruits present are blackberry, raspberry, grape, blueberry, and elder. Beech is not too common, and as it fruits best when given plenty of light many beech trees also can well be "released."

## *Certain Species Curbed*

As applied to browse species, scrub oak should be preferred to the other oaks, and under almost any circumstances some of the abundant tree oaks can well be sacrificed to make way for aspen, birch, hawthorn, and apple. If the suggestion to keep certain burned and cut-over areas in low vegetation is accepted, trimming should be severe enough to insure that sweetfern, New Jersey tea, and scrub oak are not reduced in quantity by shading.

A sufficient number of the mast producing trees must be allowed to mature so as to

keep up normal production of their valuable food crop, but even in this case it must be remembered that they will thrive better and yield more in well opened stands where there is plenty of light.

As to cover, extensive yet not endless, close growths of laurel and rhododendron may well be preserved. These plants are shade resistant so are not necessarily injured by occasional overtopping trees, as for instance, white pine and hemlock, themselves valuable above-ground cover. Except wherein extended pure stands, it will be advisable to preserve all evergreen cover. Besides the evergreens, the scrub oak is no doubt the best of the cover plants present. Apple and hawthorn in thickets also are good, and the denser such growths as those of blackberry, raspberry, and rose, are, the better.

Cover may be improved also by the piling up of parts of fallen trees or by cutting to provide brush piles. These are best when somewhat open and may well be numerous. Cutting half-way through small oaks and bending them over until the branches touch the ground is a way of forming good cover. Most of the trees live and provide shelter winter and summer. Such cover is improved by planting in it locally available vines as greenbrier, grape, Virginia-creeper, bittersweet, or honeysuckle.

## *Field and Forest Foods*

So far preservation or modification of the existing environment has been considered. We may now turn our attention to processes that involve the bringing in of something supplementary or additional. Suggestions in this respect for the various groups of wildlife utilities follow:

**Browse**—Arborvitae, juniper, mountain ash, locust, basswood (possibly present), elderberry (present but should be increased), snowberry, honeysuckle (possibly present).

**Herbage**—Will be treated under feed patches and field culture.

**Mast-producers**—Hazel can well be increased in quantity.

**Fruit-producers**—Juniper, mulberry, mountain ash, chokeberry (present but should be increased), apple, hawthorn, holly (both evergreen and deciduous), bittersweet, Virginia-creeper (this and the preceding prob-

ably present but should be increased), aralia, sourghum, cranberry-tree, sheepberry, honeysuckle.

**Seed-producers**—Wild millet, partridge pea, locust, sunflower. See also under feed patches and field culture.

**Cover**—Juniper, arborvitae, holly (evergreen), bittersweet, Virginia-creeper, honeysuckle (the last three groups probably present but worthy of increase).

## *Late Winter Fruits*

Late winter and early spring are the seasons of greatest scarcity of food for wildlife and special attention should be given to increasing the food supply available at that time. Plants retaining fruit at these seasons that were observed in Centre County or have been recommended herein for cultivation include: Juniper, red cedar, greenbrier, apple, hawthorn, chokeberry, rose, sumac, holly, bittersweet, Virginia-creeper, wintergreen, partridgeberry, honeysuckle, cranberry tree, sheepberry, and maple-leaved viburnum.

Of these, apple and hawthorn because of their great value as producers of relished browse, buds, and fruits should be given special attention. Lists of kinds known to hold fruit until March in Massachusetts and New York, a trait they will no doubt retain if established in Pennsylvania, will appear in an early issue of the Game News.

## *Feed Patches*

Of the native game species of Centre County, only the wild turkey would be much benefited by maintenance of small feed patches, and it is difficult to imagine how such patches could be made available to wild turkeys and at the same time protected from rabbits and deer.

If the authorities interested in game preservation have control of open fields on abandoned farms or care to prepare similar areas and give them annual attention, supplementary feed crops could be produced in sufficient quantity to resist extirpation by wildlife. Ten to twenty acre patches would be advisable and rye, millet, buckwheat, and clovers sown. Both the rye and clover might volunteer enough so as not to require new sowing every year. Such crops would be valuable to deer, rabbits, turkeys, and grouse.

If there are abandoned fields it is desired to devote to brushy growth, thorough burning will discourage the present weedy rough and give tree and shrub seedlings a chance.

The value of a good example to private landholders should not be overlooked, nor should the possibilities of increasing the income of submarginal farms and of counties embracing many such farms, through making the countryside more inviting to tourists, and the game lands more attractive to hunters.

**REPORT YOUR GAME KILL PROMPTLY. OUR RE-STOCKING PROGRAM DEPENDS GREATLY ON SUCH INFORMATION. PLEASE COOPERATE.**



# THE LAND PURCHASE PROGRAM

By W. GARD. CONKLIN

**S**INCE the August 1936 issue of the Game News, when the last report on the acquisition of State Game Lands was made, title has been secured for 13 additional tracts, totaling 9,201.4 acres. This brought the aggregate area of State Game Lands bought and paid for to date to 516,608 acres, distributed through 52 of the 67 counties of the State.

The tracts for which title has passed into the Commonwealth since August are:

**Centre County**, Rush Township. A tract containing 2,064.6 acres purchased from the Philipsburg Coal and Land Company, adjoining and now part of State Game Lands No. 33, comprising 11,907.7 acres.

**Westmoreland County**, St. Clair Township. 120.1 acres purchased from J. M. Trimble, adjoining State Game Lands No. 42, now containing 4,726.1 acres.

**Wyoming County**, Forkston Township. A tract known as the South Mountain Settlement, containing 191.9 acres, purchased from Jesse White. This partly cleared tract helps to square up the boundaries of State Game Lands No. 57, now comprising 24,622.3 acres.

**Erie County**, Summit and Green Townships. 335.2 acres of old farms acquired from the Erie County Commissioners, which became part of State Game Lands No. 109, now containing 950.9 acres.

**Somerset County**, Lower Turkeyfoot Township. An old farm containing 142.9 acres purchased from Lucy Steyer. This tract lies within State Game Lands No. 111, now containing 5,826.3 acres.

**Clearfield County**, Chest Township. William Schrock and others conveyed 82.4 acres, 30 acres of which could be tilled, adjoining State Game Lands No. 120, now containing 999.7 acres.

**Crawford County**, Steuben Township. 158.5 acres acquired from the Ariana S. Kennedy Estate, which became part of State Game Lands No. 122, now containing 797.1 acres.

**Bradford County**, South Creek and Springfield Townships. Five old farms constituting ideal rabbit and pheasant territory, purchased from the following, and now designated State Game Lands No. 123: E. Horton Berry 89.5 acres; Annie P. Holcombe 195.5 acres; Ralph B. Harkness 82.8 acres; Fred DeWaters and others 252.5 acres; Stephen Lewis Helrs 100.6 acres—total 720.9 acres.

**Franklin and Fulton Counties**, Warren, Peters, Ayr and Thompson Townships. 5,384.9 acres lying on Tuscarora and Dickey Mountains in good turkey territory, purchased from

Robert G. Alexander. This tract will be designated State Game Lands No. 124.

The Commission at its meeting October 8, 1936 approved the purchase of 16 tracts totaling 11,470 acres. Purchase contracts have been entered into for all but one of these tracts. The purchases approved at the October meeting include the following:

**Huntingdon County**, Union and Shirley Townships. 2,797 acres offered by the Harbison-Walker Refractories Company, upon which an Auxiliary State Game Refuge has been maintained since 1925. This tract adjoins and will become part of State Game Lands No. 71, now containing 2,011 acres. Wild turkeys, in addition to other forest game species, are fairly abundant in this section of the State.

**Carbon County**, Kidder Township. 429 acres offered by Jacob C. Loose and the Jacob A. Loose Estate. This tract adjoins 2,340 acres approved for purchase at a previous meeting of the Game Commission. Forest game species, including deer and ruffed grouse, are reasonably abundant in this section of Carbon County.

**Fayette County**, Wharton Township. Two tracts, containing respectively 593.3 acres and about 100 acres, offered by the Receiver for the Citizens Title and Trust Company of Uniontown and W. A. and Mary E. White. These tracts connect with State Game Lands No. 51, now containing 7,116 acres. This section of Fayette County is a natural habitat for forest game species, including deer and ruffed grouse.

**Lycoming County**, Lewis Township. 2,150 acres offered by Messrs. Caprio and Grieco. This tract lies within a great expanse of mountain territory and is a natural habitat for various forest game species.

**Bucks County**, Rockhill Township. Two tracts, containing respectively 145 and 4.5 acres, offered by the Rock Hill Granite Company and S. L. Musselman. Ringnecked pheasants, rabbits and squirrels are reported fairly abundant in this section of the State, and deer and ruffed grouse are occasionally seen.

**Fulton County**, Belfast Township. 367 acres offered by Nicholas Snyder. This is partly farm land in a section where wild turkeys, deer, rabbits and other small game are commonly found. The tract adjoins and will become part of State Game Lands No. 65, now containing 3,034 acres.

**Monroe County**, Tunkhannock Township. 408 acres offered by Francis J. and Mary Faust, adjoining 2,340 acres previously approved for purchase by the Game Commission, most of which lies in Kidder Township, Carbon County. Forest game species are reported fairly abundant in that section of the State.

**Venango County**, Mineral Township. 90 acres offered by Lewis B. Hart, about 35 acres of which is farm land. The tract

adjoins and will become part of State Game Lands No. 39, now containing 7,220 acres. These lands are within rather extensive forest territory where forest game species are reasonably abundant.

**Lycoming County**, Plunketts Creek Township. 937.8 acres offered by J. E. Rohrbach and Harry J. Masters. An Auxiliary State Game Refuge containing 173 acres has been maintained on this tract since 1926. It lies within a vast expanse of forest territory wherein forest game species of all kinds are reported abundant.

**Columbia County**, Briar Creek Township. 100 acres offered by the Estate of F. F. Hayman and others, adjoining State Game Lands No. 55 now containing 1,800 acres. This is forest territory populated by forest game species, including deer, ruffed grouse, squirrels and rabbits.

**Bradford County**, Overton Township. 91 acres offered by Charles Wernett, adjoining State Game Lands No. 12 containing 21,728 acres. A portion of the 91 acre tract has been farmed and is adapted to seeding with cereals to provide more abundant food for game.

**Armstrong County**, Mahoning Township. 1,037 acres offered by R. R. Hodgson. This acreage comprises a number of old farms, of which at least 100 acres are still tillable. It is a natural habitat of both farm and forest game species, and is the type of land particularly desirable for game purposes, since food and cover improvements are practical at not too great expense.

**Elk County**, Jones Township. The abandoned right-of-way of the Johnsonburg Railroad Company containing 13.25 acres, through State Game Lands No. 25. The Railroad Company will quit claim this acreage to the Commonwealth for use of the Game Commission at the nominal consideration of \$1.00.

**Carbon County**, Kidder Township. 2,194.5 acres offered by the Broad Street National Bank of Trenton, New Jersey. This purchase was approved providing the owner would be willing to reduce the price asked. This question is still undecided and, therefore, no purchase contract has yet been made.

Including the sixteen tracts listed above, a total of 70,000 acres distributed throughout the State are now under contract for purchase. The Commission's title abstractors and surveyors have an unusually large job on their hands, for the responsibility of safeguarding the Commission's interests by seeing to it that the titles are good and that the acreage paid for is there, largely depends on them.

## REVEGETATING ERODING HILLSIDES

By ARTHUR C. MCINTYRE

*Note:—Criticisms have been made during the past year or so against the collection of berries, seeds and nuts in Pennsylvania by the Soil Conservation Service of the United States Department of Agriculture, some of which are sowed in nurseries in this State and some shipped to other states, it being feared that the collection of large quantities of nuts, etc., would create a shortage of food for game in this State. The Service was asked for an explanation of its purposes and an estimate of seed collections and plantings. In compliance with that request, Mr. Arthur C. McIntyre, Regional Forester of the Soil Conservation Service reports as follows:*

**T**HE loss of fertile farm lands has reached serious proportions. It is estimated that 3,000,000,000 tons of soil material are washed out of the fields and pastures of America every year.

Unrestrained erosion is rapidly building a new public domain, an American empire of impoverished and worn-out land, stripped of its rich surface covering or gullied beyond the possibility of practical reclamation. The cost to the farmers and ranchers of the country amounts to not less than \$400,000,000 annually, to say nothing of the stupendous damage to highways and railways and the silting of reservoirs, streams, ditches and harbors.

This appalling wastage is not merely continuing, it is speeding up with the removal of the absorptive topsoil down to less absorptive, less productive, more erosive sub-

soil. Over this erosion-exposed material, which usually consists of impervious clay, rain water flows away faster from millions of denuded acres to increase the frequency and volume of floods. Rich bottom lands are reduced in productivity or ruined outright by overwash of poor subsoil material, sand and gravel swept out of the hills.

The demonstrational land use, soil husbandry, and moisture conservation program of the Soil Conservation Service is being carried out in nearly every State of the Union. Working with individual farmers, in unit watersheds, plans are developed for the fullest use of the land after considering soil type, degree of slope, extent of erosion, type of vegetative cover and present land use. Actual work in developing the demonstration is done in cooperation with the farmer. The net results of this coordinated and integrated program are thousands of acres of farm lands placed under systems of agricultural use which will conserve soil and soil moisture and eventually return multiple benefits in land use.

Recommendations are made for revegetating barren, eroding, idle and unproductive acres. In the plans for revegetation, provision is made for the inclusion of such trees and shrubs as will definitely improve environmental conditions for wildlife. As part of the cooperation extended by the Service in creating a demonstration of erosion control, trees and other woody vegetation are furnished and planted on the eroding lands of

the farm by use of C.C.C. labor. Millions of plants are thus used. Nurseries have been developed and in addition several million seedlings have been purchased from state and private nurseries. Seed spot planting is being practiced on a large scale.

During the spring of 1936 there was planted by the Soil Conservation Service in Pennsylvania, on farms of cooperators, over 2,500,000 trees, shrubs, and vines. The estimated amount for planting during the fall of 1936 is \$2,000,000 and for the spring of 1937, \$5,000,000. A program of this magnitude, concentrated as it is on rather small unit watershed areas, cannot help but benefit game and wildlife in general. It provides innumerable much needed game coverts well supplied with desirable foods.

In order to obtain sufficient planting materials it has been necessary to collect large amounts of seed within the state and to secure additional supplies from outside sources.

During the fall of 1935 there were collected in Pennsylvania about 100,000 pounds of seed from 80 species of woody vegetation. Wherever sufficient amounts of seed of a desired species could not be obtained within the state, exchanges were arranged with neighboring states. Seed from trees and shrubs whose fruits are eaten by wildlife was collected only along narrow strips, thus leaving desirable amounts for food in each locality.

The collection program for the fall of 1937

(Continued on page 16)



# CURRENT TOPICS

## FOX BOUNTY HEAVY

Gray foxes are very plentiful in the northern counties, judging from the large claims presented for bounty during early November. One claim alone included 76 and another 28. Another individual submitted several claims totalling 75 foxes. Many other lesser claims also were received.

Goshawks, too, are being probated in large numbers. At this writing (November 12) 112 have been presented. Few hawks other than this big blue darter have been sent in, indicating that hunters are apparently learning to differentiate between the good and bad forms. The Game Commission does not look favorably upon the wholesale killing of the more beneficial species, even though they are not protected.

## SMALL GAME SEASON

While it is yet too early to recount even briefly the results of the small game season, at least we can say without the slightest hesitation that the 9:00 o'clock feature of the opening day met with the approval of most sportsmen. One thing is certain—it prevented a lot of accidents and saved a lot of game. If it did nothing more than accomplish these two results, it was worth all the efforts made to enforce it, and the Commission feels that only the irresponsible hunter or the game hog could believe otherwise.

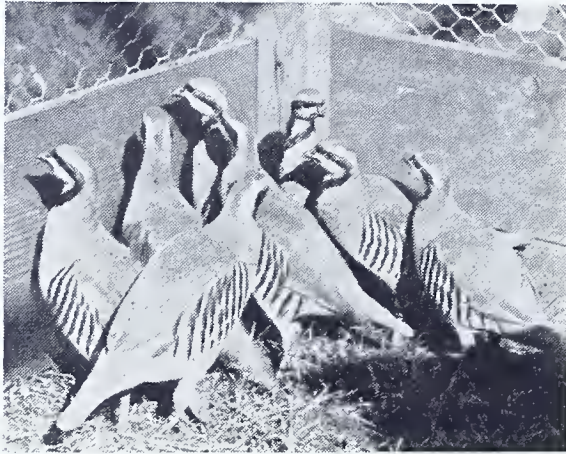
As predicted, quail were very scarce and rabbits and squirrels plentiful only in spots. Ringneck pheasants, fortunately, were very abundant and relieved the burden of a lot of shooting of the aforementioned species. Good grouse bags were secured in some sections; in others few birds were found. The wild turkey kill was unusually good throughout the entire range of this canny denizen of our mountain slopes. All together the season can be termed more than fair.

It reminds us of a very important duty, however—that of planning our winter feeding programs early. Get busy now. Do not wait until snow covers the ground to build shelters and feeding stations to attract game. Prepare and get the game coming to your feeding counters early.

Mr. William L. Finley, nationally known lecturer and wildlife photographer will tour the eastern part of the United States during January and February and plans to spend part of the time in Pennsylvania.

Mr. Finley has made a life's study of the habits of birds and mammals and his lectures on these subjects, supplemented by motion pictures, provide the sort of entertainment that one seldom sees.

If any sportsmen's associations are interested in booking Mr. Finley, please contact the Game Commission at Harrisburg, Pa.



**Chukar Partridges:** These birds may some day become popular game birds in Pennsylvania. They are now being reared at the game farms for experimental purposes.

During September officers of the Game Commission collected \$1009.00 in fines, mostly for pre-season hunting and hunting without license.

## WELCOME GUEST

Ben East, commentator of all game conservation news for the State of Michigan, visited the Game Commission's office during November. Mr. East has succeeded in arousing much interest in Michigan's game program through the use of full page newspaper spreads devoted entirely to hunting and fishing. As a result of this energetic campaign he has amassed a big following of the more serious thinking sportsmen. Michigan newspapers, especially the larger Metropolitan publishers, have unanimously endorsed his program of game news dissemination.

Similar weekly service is also available to all Pennsylvania newspapers through our educational bureau, and all editors are urged to use it.

**I wish to congratulate the sportsmen of Pennsylvania for their splendid cooperation in the observance of the nine o'clock zero hour on the first day of the hunting season. As a result the number of human casualties that occur each year during the first day have been greatly curtailed, while many birds and rabbits were preserved for the remainder of the season which, in other years, would have been shot during the early hours of the opening day.**

**Nicholas Biddle, President**

## WHAT DOES HUNTING COST?

The Game Commission expects at the close of the hunting season to mail a quantity of postal cards to resident and non-resident hunters in order to get an idea just how much money they spent for food and lodging, gas, oil and repairs, guns and ammunition, guides, cigarettes and other incidentals pertinent to their trip afield this year.

We will not have enough cards to include all our hunting public. Therefore, we shall appreciate it very much if you will furnish this information by letter not later than January 1st.

Our purpose in amassing this data is to arrive at a conservative estimate of the value of hunting in Pennsylvania. We feel we have been ultra conservative in our estimates heretofore.

## DEER DAMAGE

Deer are causing landowners unusual annoyance this winter. Records show that over 320 were killed in October, of which 299 were retained for food by farmers. Sixteen were turned over to hospitals; five were unfit for use. The damage occurred in thirty-two counties.

## THIRTY DAY LIMIT

Do not forget that bear meat and small game may not be kept longer than thirty days after the close of the season. In other words, December 26 marks the deadline. Likewise venison must be diagnosed before January 12.

## HUNTERS MORE CAREFUL.

Preliminary reports indicate that hunters were far more careful this season than ever before. Records up to November 18 show that only nine fatalities and 87 non-fatalities occurred, compared with 17 fatal and 190 non-fatal accidents during the same period in 1935.

Field officers and interested sportsmen claim that the nine o'clock feature of the opening day was largely responsible for this notable decrease. Many hunters liked the delayed opening so much that they are now advocating it for the large game season next year.

One hunter was prosecuted to the utmost for having killed another in mistake for game. He was James Sweeney, thirty-five year old high school teacher of Clarion, who pleaded guilty to having fired the shot that killed Harry Clinger, sixty-four year old Clarion County farmer.

Judge Harry M. Rimer sentenced Clinger to pay \$1,000 fine, placed him on parole for five years, and ordered a ten year revocation of his hunting license.





QUESTIONS AND ANSWERS

- Q. How fast does a loon swim under water?
- A. The answer is based on observations by C. A. Harwell, Park Naturalist, Yosemite Nature Notes, who clocked a bird over known distances. Fourteen distinct dives yield an average of 194 feet per dive, travelled at an average speed of 56 seconds. Reduced to more generally understood terms, this means that the bird swam under water at the rate of 3.1 miles per hour, or a good walking speed for a man.
- Q. Where are the State Game Farms located?
- A. In Lycoming, Juniata, Lawrence and Montgomery Counties.
- Q. Are elk increasing in Pennsylvania?
- A. No, and for the reason that they are barely holding their own, the season is closed on them.
- Q. Is it legal to participate in the killing of more than six deer?
- A. Yes.
- Q. If you participate in the killing of five deer, then go home with the idea of hunting later on in the season, is it legal to participate in the killing of another, or the sixth, deer?
- A. Yes.
- Q. Must you have a roster to hunt big game?
- A. Parties of two or more must have a roster.

FIELD NOTES

A doe deer, hit by a truck in Monroe County, gave birth to twin fawns, a buck and a doe. The animal died shortly afterwards. — Martin D. Martz, East Mauch Chunk, Pa.

A wild mallard successfully hatched and reared nine ducklings in Carbon County, proving beyond doubt that the small lakes in the northeastern part of the State attract these waterfowl during the nesting season. —Martin D. Martz, East Mauch Chunk, Pa.

Sportsmen are asked to report any unusual deer conditions in the territory they hunt this season. We would like to know how the animals appear physically, whether they are scarce or abundant, and how much food is available for them.

Many farmers left 10 to 12 inches of stubble in their fields this year, thus providing better feeding and hiding places for game.

Deer-chasing dogs must be kept out of the woods. Your cooperation is needed to help our officers curb this menace. Last winter hundreds of deer were killed by stray dogs, which were unusually vicious because of their extreme hunger.

PUT GRIT AND LOTS OF IT IN YOUR FEEDING SHELTERS THIS WINTER.

Be sure to sight in your rifle before you go deer hunting. Many a prize trophy has escaped because of poorly adjusted sights.

Walter Roy, Lancaster County shot a squirrel with a wire fastened to its neck. Apparently it had been caught in a snare. The snare is an illegal device for the taking of rabbits, squirrels, and all fur-bearing animals.

Edward Weaver of Camp Hill, Cumberland County, Pennsylvania, reported on October 8, a late nesting of the Mourning Dove. At that time there was one young, about ten days old, in the nest.

Would the domestic guinea make a good game bird? What do our readers think about it?

Mr. W. J. Knobloch, New Castle, Pa., and a party of fifteen had the rare experience of watching beavers at play in a dam in Bailey Run, Potter County. At one time the largest of four beavers actually nosed the flashlight held by Mr. Knobloch. One little fellow would swim into the current at the spillway and catch hold of the old one's tail, riding thus to the upper end of the dam. There it would dismount and start playing around in the water until it would get to the spillway, then the Beaver Tail Taxi would be hailed and the ride to safer waters again undertaken.

Nimble footwork saved two road workers from injury when they engaged in a game of tag around a stump with an infuriated buck last week near the Game Refuge at Rector, Westmoreland County.

With only the stump as protection against the rushes of the aroused buck, the agility and alertness of the two men were at a premium. Finally the frustrated animal gave it up as a bad job and left, much to the relief of the men.



O. M. Pinkerton, Sam Froehlich, and Harold Plasterer, Chief Bounty Clerk with 28 gray foxes presented for bounty by H. L. Morrison, of R. D. 2, Clearfield



E. S. Conord and G. H. Coates, Chester County hunters, having their licenses checked by Game Officials Harold Carrol and J. B. Sedam. Note the safety zone sign warning hunters not to shoot within 150 yards of buildings.



# WITH THE CLUBS

## CLEANING YOUR RIFLE

Rust in a gun barrel is caused almost entirely by a chemical in the primer that burns to something similar to table salt—this being potassium chloride while table salt is sodium chloride. Spray the barrel with finely divided particles of either, let the moisture in the air get more than 60% saturation or "humidity," and you get brine. And if you don't know what brine does to bright steel, make the test for yourself, but not in your pet barrel.

The way to get salt out of a thing is by using water, not oil, perfume or fancy names. The safe way is an aqueous solution or emulsion that contains water but won't rust. Hot water with soap or soda is entirely effective, but may rust gun parts or barrel if not entirely removed. The best cleaner for high-power rifles is Chloroil, invented by Dr. Huff of the Bureau of Mines, an aqueous solution. Hoppe No. 9 is very satisfactory, but with high-power rifles requires a second cleaning within a day or two, showing that entire removal of the salt was not made in the first cleaning. Hoppe is safe to leave in the bore, Chloroil should be removed within a few days and bore coated with a good oil.

Safetipaste, applied with the bore still hot, will save cleaning the gun for several days after corrosive primers and often is safe to let go indefinitely. Oil is not a gun cleaner after corrosive primers, and oil will not prevent rust forming underneath it, keep that in mind. Kerosene is the best remover of fouling or rust from a bad barrel, but not to leave in a barrel. Ordinary medium grade steel wool, bought from a hardware store in packages, is the handiest remover of lead from a shotgun barrel or a light coat of rust that may be starting. Put a few drops of oil on the steel wool.

Don't bother cleaning after firing with rustless primers, merely coat bore with a good oil—and buddy, don't think all advertised oils are good oils; get oil, not spavin cure or furniture polish. Don't bother with anything after rustless primer, lubricated lead bullet stuff in rimfire.

Don't try to clean corrosive primer residue with oil, and don't let the gun go overnight. Follow directions, use a cleaner that is worth something for cleaning, and never mind claims or loud smells as proof of virtue in a cleaning preparation—Capt. E. C. Crossman in *Natural Sportsman*.

The Bucktails of Venango County can look back with pride upon what has been accomplished by them during 1936.

Under the leadership of W. E. (Bill) Hughes, the club has taken its place among those that really do things. During January, February and March, the boys put on a gigantic feeding program. In March and April the club purchased and released 520 rabbits at a cost of \$500.00.

May found the boys, 400 strong, gathered around the banquet tables with their ladies, enjoying one of the most perfect evenings spent. After partaking of a well filled plate, it was their pleasure to hear talks from Game Commissioner Bob Lamberton, and Game Supervisors Jay Gilford and Hayes Englert. An amateur hour put on by members, coupled with dancing, rounded out an evening that will be long remembered.

On September 21, the Club held its Field Meet, and on October 31 the Bucktail Beagle Trials are run.

November and December are finally here. These are your days, fellow sportsmen, but let us keep in mind that seed must be left for another day—be conservative in your shooting—and at the end be able to say, "I was a real sportsman."

Let us urge members of the Bucktails who do not get the Pennsylvania Game News, to give it some thought. Here we have a magazine published by the Game Commission which keeps us posted on what they are doing for us.

Dr. E. K. Tingley's liver and white pointer, Hexer's Carolina Jack, won the all-age stake event at Indiantown Gap, Lebanon County, November 9, in the Eastern Win-

ners Field Trials.

A run-off was necessary before Tingley's dog—winner of the National Pheasant championship—was accorded the triumph over Dr. H. F. Longsdorf's Gee-Whiz, its brace mate. Dr. Tingley is from Marietta, Pa., and Dr. Longsdorf is Commissioner of Game, State of New Jersey.

Hollyford Doc, owned and handled by Robert Shinn, of Mt. Holly, N. J., won the shooting dog stake. Clark's Valley Dan, owned and handled by W. J. Rockey, of Harrisburg, placed second. This big white and chestnut setter dog had two finds which he handled without a fault and finished beautifully.

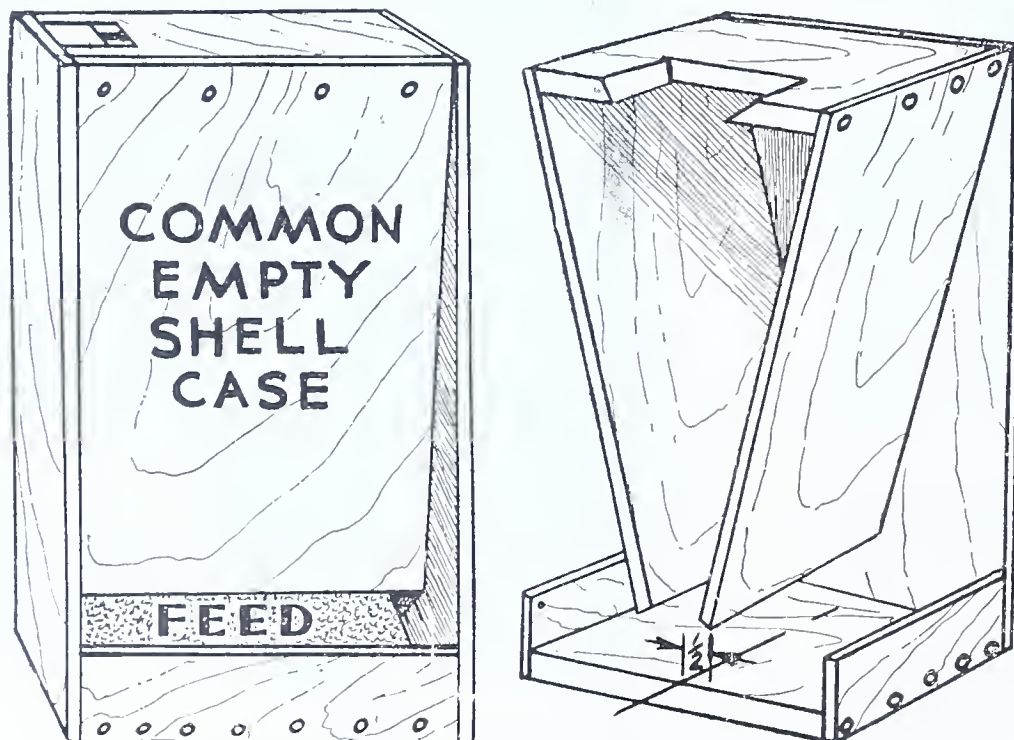
The Derby Stake was won by H. Watson's Tommy Boy, a liver and white pointer, Tommy was off like a shot and kept up his killing pace during the entire time he was down. Tommy Boy also won the Derby Stake of the Capitol City Field Trial Association held but a short time ago on the same course. Had he not turned in the race that he did, Lively Peggy, black, white, and ticked setter would have taken honors away from him, for this little setter bitch, owned and handled by D. H. Snively, of Hagerstown, Md., had a merry way of going and ran an industrious heat.

The Allegheny County Sportsmen's League recently sponsored a Junior Organization composed of members from ten to fifteen years of age. They are under the jurisdiction of clubs holding membership in the County Association. The young men will be taught the proper use of firearms, and how best to protect wildlife and feed it in severe weather.

The Lancaster County Fish and Game Association recently held a Buffalo Supper and Jamboree with approximately 600 persons in attendance. Following the supper, motion pictures were shown by a representative of the Commission.

George Adams, of Gratz, Pennsylvania, live-bird champion of Pennsylvania, retained his title Saturday, October 31, against an all-star field in a shoot at the Shamokin Valley Gun and Country Club.

Adams, together with Jim Fine, Bristol; Alex Schwartz, Philadelphia, and Roy Dunkelberger, Reading, were tied with a perfect score at the end of the regular 20 bird shoot. In the shootoff, however, Mr. Adams



Common empty shell case converted into a feeder.



scored another perfect to nose out his opponents.

There are sixty-five clubs affiliated with the Schuylkill County Sportsmen's Association, representing over 20,000 local nimrods. Some clubs boast memberships of four and five hundred.

### LOST

One male 'Coonhound on October 5. Answers to the name of "Buck." Bore Lehigh County License No. 802. 6 years old. Tan and white. Anyone having knowledge of the whereabouts of this dog should communicate with the owner Mr. Michael Scholtis, Cementon, Pa., or the Editor.

### FOUND

Mr. Frank Loeffler, Harleysville, Pa., found a beagle hound Friday evening, November 6. The dog had a Perry County 1936 license, the number being 1394. The owner should contact Mr. Loeffler immediately.

The members of the Adams County Fish and Game Association took action along two courses at their October meeting for the purpose of conserving and building up the small game population in the county.

They endorsed a plan for the establishment of a 158 acre auxiliary small game refuge, near Seven Stars, and appointed a committee to raise funds to be used to purchase game for stocking sections of the county.

More than sixty bird dog fanciers were on hand for the first grouse trials, sponsored by the newly organized Black Forest Grouse Trial Club, Lycoming County. The galleries were large and enthusiastic, and everyone is looking forward to a bigger and better Trial next year.

Did you ever drag a 355 lb. black bear over about two miles of rugged trail in the dark? If you didn't, then ask Game Commissioner Robert Lamberton of Franklin how he felt after he helped his two com-



Photo Courtesy O. M. Deibler

This little girl loves her Bag-Pipe—in fact it's the only brand she will chew. She is a great pet at the Fisherman's Paradise, Center County.

panions, H. L. Buchanan and "Doc" Wagner, lug it in.

Mr. Buchanan stopped the black beauty.

Brightmyer and Mills Patton of Ford City. —Anonymous.

Other members of the party included "Al"



Hunters Look before you shoot—Avert these tragedies of the woods—  
Be Good Sportsmen.

Below is an ingenious device patented by S. Paul Baker, member of the New Cumberland Sportsmen's Association. The synthetic bunny is made of sheet iron or other metal, and is propelled across a cable which passes behind a row of corn shocks. The shocks are about 20 ft. apart and the rabbit passes behind them slow or fast, depending upon how hard the boy pulls the "spring," which in this case is an old inner tube.





# WILD TURKEY

By N. R. CASILLO

SINCE early morning we had tramped the ridges in the vicinity of Cowan's Gap and our bags totalled only two grouse, one fox squirrel, and a small opossum that I was endeavoring to take back home alive. It was noon so we stopped for a snack while the two dogs took a much needed rest. It was still early in the season and the going was hot.

"We've got to do better than this," remarked Harry Short as he endeavored to hold a piping-hot cup of coffee.

"Shooting is terrible," agreed his twin brother George.

I maintained a discreet silence for I had bagged one of the grouse and the squirrel, not to mention the capture of the opossum.

"If this blamed wind would blow itself out it wouldn't be so bad," Harry grumbled as he hastily placed the offending cup on a convenient log, and gingerly snapped his fingers.

In the middle of the afternoon the wind subsided and the dogs did better work. On a mountain side in a thicket of haws and hemlock we put up a covey that easily totalled a dozen birds. The dogs were lost in the thick cover so we had no warning of the birds' presence. They exploded in all directions, their roaring take-offs reverberating in the narrow valley like a sustained drum roll. Again I was lucky enough to connect thereby closing my books for the day, so far as grouse were concerned.

George also connected with one of the elusive targets, the bird shedding what appeared like a peck of feathers, but it set its wings and slanted down the hillside, crossed a small stream and then crumpled. I venture to say that the bird covered the greater part of the distance on wings rigidly set in death.

After the excited dogs found George's bird my companions decided to try for one or two more of the scattered covey, while I planned to work back toward the parked car and hunt a promising patch of squirrel timber through which we had passed earlier in the day.

On the way back I flushed eight grouse, half of which presented easy shots. In fact, one actually flew into a nearby tree, scrutinized me and then hopped off to another and so on; thrice repeating the performance with disastrous effects on my blood pressure. That seems to be the usual break after one has bagged his limit.

The squirrel wood proved more extensive than had been my first impression, and consisted chiefly of large oaks, beeches, and occasional hemlocks; magnificent specimens that had somehow been spared.

After a brief survey I climbed farther up the mountain and made myself comfortable against a massive bole of a giant beech which overlooked a small mountain rill, and a considerable portion of the opposite slope. Over to my right, bridging a deep gully, lay what remained of an ancient hemlock, its immense stump so close to me that I could touch it, and incidentally, affording me excellent cover on that side. With my gun across my knees I settled back to listen to the furtive noises of the lesser woodfolk, and more important, to get a crack at a squirrel or two.

Scarcely two minutes had passed when I was startled by bits of bark falling on my hat. Cautiously I raised my head in time to receive an eye full of nut shells that a pesky red squirrel was chewing off of a beechnut. With tantalizing deliberation he slowly

consumed the nut before scampering off on more important business.

A little later I became aware of a movement just within the field of vision of my right eye. By a great deal of straining and rolling I finally maneuvered that organ to a point where I could vaguely see the same or another pesky piny attempting to get a close-up view of my right ear. With an inaudible groan I again relaxed and settled back to give my full attention to the business at hand.

At the end of thirty minutes my patience was exhausted and I was ready to move. And that, I might add, is the almost irresistible temptation with which the squirrel hunter is confronted. If he does move, invariably it's at a time when the quarry is just about to disclose itself. With an effort I suppressed the desire.

While watching the acrobatic gyrations of a flock of chickadees, I was attracted by an uncertain movement a considerable distance down the valley and close to the edge of the stream. At that point grew a copse of alders, making vision dim and uncertain so that I was not quite positive that I had seen a movement at all. It may have been a caprice of the imagination, nevertheless I kept the spot under close surveillance.

Dusk was slowly settling in that wild mountain ravine and I was ready to call it a day, when from behind the alder thicket appeared the shadowy figure of a large bird.

Wild turkey was the first thing that flashed in my mind. I could feel the blood pounding in my ears as I watched it slowly pick its way up the ravine. Then, to my unbounded amazement, five more of the wraith-like creatures appeared, each in its turn; as dramatic an episode as I have ever witnessed. There was no question in my mind now. **They were turkeys.** The first I had ever seen in their native haunts.

My heart played strange tricks as I attempted to efface myself from the landscape. The flock continued its leisurely way upstream until the nearest bird was not more than seventy-five yards away. For the first time since seeing them I thought of my gun. But what could number six shot do at such a distance? Shaking like an aspen leaf I waited with the hope that they would approach within effective range.

My fervent prayers were not answered for they swerved to the right, worked across the stream and disappeared from my vision behind the hemlock stump. I couldn't possibly follow them visually unless I moved, and I was afraid to do that. So crouching still closer to the ground I waited, hoping that they would again feed in my direction.

In the meanwhile, at various intervals I heard the sibilant "swish-swish-swish" of great wings. Once I thought that I heard a querulous call but dismissed the idea as fantastic. I was consumed with curiosity and excitement but decided to wait a little longer before making any move.

Suddenly, the sylvan silences were ruptured by the thunder of beating wings and almost simultaneously by the deafening roar of a shotgun. Stunned at the sudden turn in events, I jumped to my feet and quickly ran around to the other side of the stump. A short distance away one of the birds was beating its life out on the forest floor, mortally wounded by the mysterious hunter.

As I stood there debating on my next move I perceived a man bounding through the forest in the direction of the now stilled turkey. Upon reaching it he gave a wild whoop and yelled: "I got him!" And again, "whoop!" Of course I recognized George's voice, for that's who it was, the lucky stiff. In another minute Harry joined us. What a wild trio.

Interrupted by a lot of lusty back thumping they explained that they had spied the birds shortly after I had left

(Continued on page 16)



The photographer failed to get a picture of a deer crossing the road, but when he turned to get into his car, this is what he saw.



# SCATTER LOADS

Game is becoming so plentiful on Utah ranges the livestock industry is threatened, that state planning board reported recently.

The number of deer in the state increased from 11,466 in 1920 to 100,000 in 1934, when the last census was taken.

Quail, for the first time in history, were stocked this year by the State Game and Fish Department in Georgia. Fifty pairs of these birds, raised on the state game farm, were released by one of the county sportsmen's associations.

The birds were given full protection during the shooting season this year in order to bring them through the winter in fine shape for the breeding season next spring.

Georgia officials believe it is impossible for them or for any state department to produce on a game farm, shooting stock for the public. State game farms can be expected to produce but breeding stock alone. This breeding stock when released in the wild must be relied upon to produce a shooting stock at a more reasonable cost. Released birds must be protected for at least one year in order to give them an opportunity to increase and multiply and reduce the state's per head investment in them.

The thirty-seventh annual summary of the Federal, State, and Canadian provincial game laws, recently published by the Biological Survey, states that the majority of hunters nowadays realize that no game means no hunting, and that the future of their sport depends upon the conservation of breeding stocks. The restoration of habitat is necessary to a future game supply, but an adequate breeding stock is indispensable. Laws are made to carry out this essential part of a constructive program for the restoration of wildlife, and they are preparing the way for a happier future for hunters.

To prevent ivy and sumac poisoning if you are exposed, apply a neutralizing salt (ferric chloride or ferrous sulphate) preferably, or soap and water or alcohol; then wash or clean all clothes or other objects which may have come in contact with the poison.

If the poison has been contracted, bathe the skin in extremely hot water to relieve the itching. Strong solutions of baking soda, Epsom salts, photographers' hypo applied to loose bandages, or the various preventives, are also said to relieve the itching.

Zinc oxide ointment may hasten the healing after the scabs have formed, but do not use it or any other ointment or salve during the early stages, as they may only spread the poisoning.

Severe cases of the infection should be treated by a physician.

## NEW LITERATURE

Governmental Problems in Wild Life Conservation, by Robert H. Conner. Studies in History, Economics, and Public Law No. 411. 250 pp. Columbia University Press, New York, 1935. Price, \$3.25.

The thirty-sixth annual directory of national and statewide organizations and their officials, published by the Biological Survey, shows a growth of interest in wildlife as reflected in the continuing increase in the number of organizations concerned with its protection.

Copies of the directory may be obtained at five cents each from the Superintendent of Documents, Washington, D. C.

Deer are migrating from Western Pennsylvania into Ohio. On October 12, several Cleveland squirrel hunters observed a large buck near Geneva, Ohio. Local farmers told the Clevelanders that quite a few of these animals are coming over from Pennsylvania.

Indiana has set aside two state parks and one game refuge for bow and arrow enthusiasts. This sport is becoming more popular year after year, and many clubs include archery contests in their field day programs.

More women took out hunting licenses this year than ever before, according to reports from the County Treasurers. This further proves that members of the fair sex are giving their husbands, brothers and sweethearts a run for their money these days when it comes to handling a gun. Their ability at the traps, on the range, and in the fields is outstanding and many of them are worthy competitors for the best of male contestants.

The Infantry School of Fort Benning, Georgia, recently established a Fish and Game Commission which will act in an advisory capacity to the Commandant.

The Commission is composed of camp officers. The 97,000 acres comprising the reservation have been set aside as a game reserve and public shooting ground under direct control of the Provost Marshall. The land is divided into areas which are opened or closed to hunting as the game population warrants. A small charge is made for registering all hunters and fishermen, the proceeds of which go to purchase feed and to buy game to restock the reservation.

Fifty-seven small refuges for migratory waterfowl and water conservation have been established in North Dakota during the past year by the U. S. Biological Survey on more than 90,000 acres of land turned over to the Government through perpetual leases signed by farmers and other landowners. Twenty-five such refuges have been developed during the past year with funds from the Works Progress Administration, and 1,800 men are now working to improve the 32 other refuges.

A new product on the German market develops and fixes photographic negatives in one bath, thereby saving about 13 minutes in each operation.



Photo courtesy Altoona Mirror

This full grown leopard which was shot recently in the mountains near St. Clairsville, Bedford county, after terrorizing that region for some days, killing cattle and frightening people. G. G. Hall of Bedford, who killed the leopard, is shown to the left of the animal. J. C. Syster, from whose menagerie the leopard escaped, is to the right.



## 1936 IN REVIEW

(Continued from page 2)

**Game Propagation**—Due to improved maintenance and operating efficiency, artificial propagation of mature game birds on Pennsylvania's State Game Farms reached its highest peak in 1936. The Commission has adopted the policy of releasing mature stock only so far as possible, and to produce birds of higher quality rather than mere quantities. In the future the majority of the birds raised on state game farms, or purchased for distribution, will be released in the springtime.

**Restocking Plans**—Before this magazine is delivered, rabbit restocking work will already be underway. The Commission proposes to release at least 50,000 rabbits between the close of the small game season and the Christmas Holidays, so that these animals may be received while they are in prime condition and be able to locate suitable homes before heavy snows arrive. More than 17,000 cock pheasants and over 4,000 bobwhite quail are being held at the Game Farms for distribution next spring, the pheasants principally in localities where hens already abound. We also are holding a limited number of hen pheasants to supplement the stock already in the field.

**Research Program Expanded**—During the year the Commission established a Division of Game Research and Distribution, a consolidation of two former units, which marks an important advancement. The Commission hopes to expand its research activities in an effort to solve many of its game problems. This important undertaking will be pushed aggressively.

**Field Staff Reorganization**—Early in 1936 steps were taken to reorganize the entire field staff in the interest of greater efficiency and operating economy. All of the Division Supervisors were reassigned; former Assistant District Protectors were recommissioned as Traveling Protectors and assigned to duty wherever the Division Supervisor finds their services are needed most; and various District Game Protectors were transferred to new districts. In July all field officers were put on a more equitable salary schedule,

with definite arrangements for annual promotions for meritorious service. Officers who do not render satisfactory service will be dropped from the staff promptly.

**New Training School**—The Commission's Training School, heretofore used to give its regular staff a "refresher course" annually, was established as a permanent training institution to provide well trained, efficient men to fill all vacancies in the field. The first class of 35, selected by competitive examination, began its studies on July 1. As we go to press 32 of these men are still in training, all of them now on field duty. This innovation, the first of its kind in America, constitutes another important forward step in Pennsylvania's wildlife administrative and management program. These student officers will complete their course of training about March 1 and be assigned to regular duty.

**Enlarged Educational Facilities**—During 1936 the Commission expanded its educational program. The manner in which the thinking sportsmen of the Commonwealth are cooperating with the Commission indicates that this effort has been fully justified. In addition to the educational work, conducted by a staff of field lecturers, the press, and the radio, the PENNSYLVANIA GAME NEWS has more than doubled its circle of readers during the year. At the beginning of the 1934-36 biennium, there were only 4,000 GAME NEWS subscribers. On January 1, 1936, there were 8,000 subscribers. Today we have over 15,000 sportsmen reading the GAME NEWS regularly, and the circulation is increasing at a most encouraging pace.

Space does not permit further elaboration upon the progress during 1936, but the foregoing summary will give the readers of the GAME NEWS a bird's-eye view of the manner in which the Commission is trying to assure the sportsmen of Pennsylvania better hunting in the future. The continued confidence which our sportsmen evidence toward the Board and its staff is most gratifying. During the coming year we shall do our best to merit that confidence.

## PENNSYLVANIA BOUNTY SYSTEM

(Continued from page 5)

## 3. Trends

The sum annually expended for the payment of bounties varies greatly from year to year, but by considering the payments made during the twenty-year period from 1915-35 on the basis of the annual average for each of the four five-year periods contained therein, some insight regarding the cost trends may be gained. The figures in question are as follows:

Period	Annual Average Cost
1915-1920 .....	\$ 68,804.40
1920-1925 .....	102,980.10
1925-1930 .....	99,673.70
1930-1935 .....	104,556.50

At first glance, it appears that following the first five-year period the bounty cost has remained fairly constant, but such is not the case. The true trend of cost during the past twenty years has been that of a general increase, more rapid from 1915-1925 than from 1925-1935. The same would be clearly shown in the figures above if it were not for the fact that during the 1930-1935 period the weasel bounty rate was for one year \$2.00 and for three years \$1.50, while with the exception of six months in 1919, the rate during the entirety of the three periods 1915-

1920, 1925-1930 and 1930-35, remained constantly at \$1.00.

The cost figures just presented may be readily visualized from a careful study of the graphs presented in Figure I.

## REVEGETATING ERODING HILLSIDES

(Continued from page 9)

calls for the obtaining of 175,222 pounds of seed in the eleven northeastern states comprising Region One. Collections are being made only in those states where a good seed crop occurs and where it is economical and desirable to carry on the work. There is an exchange of seed between states, and Pennsylvania should not hesitate to contribute her share to attain the objectives of this worthwhile work. She will, it is firmly believed, receive benefits within the next few years far in excess of losses to wildlife at this time.

The estimated requirements for planting conifers and hardwoods on soil conservation projects in Pennsylvania during the fall of 1936 and spring of 1937 are: pines and spruces, 2,325,000 trees; maples, 180,000; ashes, 195,000; hickories, 140,000; walnut, 100,000; yellow poplar, 125,000; oaks, 250,000, and black locust, 1,425,000.

Trees, shrubs and vines of special value to wildlife include june berry, 24,000; hackberry, 30,000; bittersweet, 165,000; aronia, 200,000; dogwoods, 200,000; mulberry, 135,000; viburnums, 600,000, and cherries, 158,000.

Thousands of pounds of seed also will be required, including especially 10,000 pounds of walnut, 7,700 pounds of oak and 3,900 pounds of hickory seeds.

## WILD TURKEY

(Continued from page 14)

them. After drawing straws, Harry led the dogs back to the car while George stalked the birds.

George turned to me and asked: "Where were you when I shot?"

"Right there in back of that stump," I answered, pointing at it.

"W-what!" he stammered in amazement.

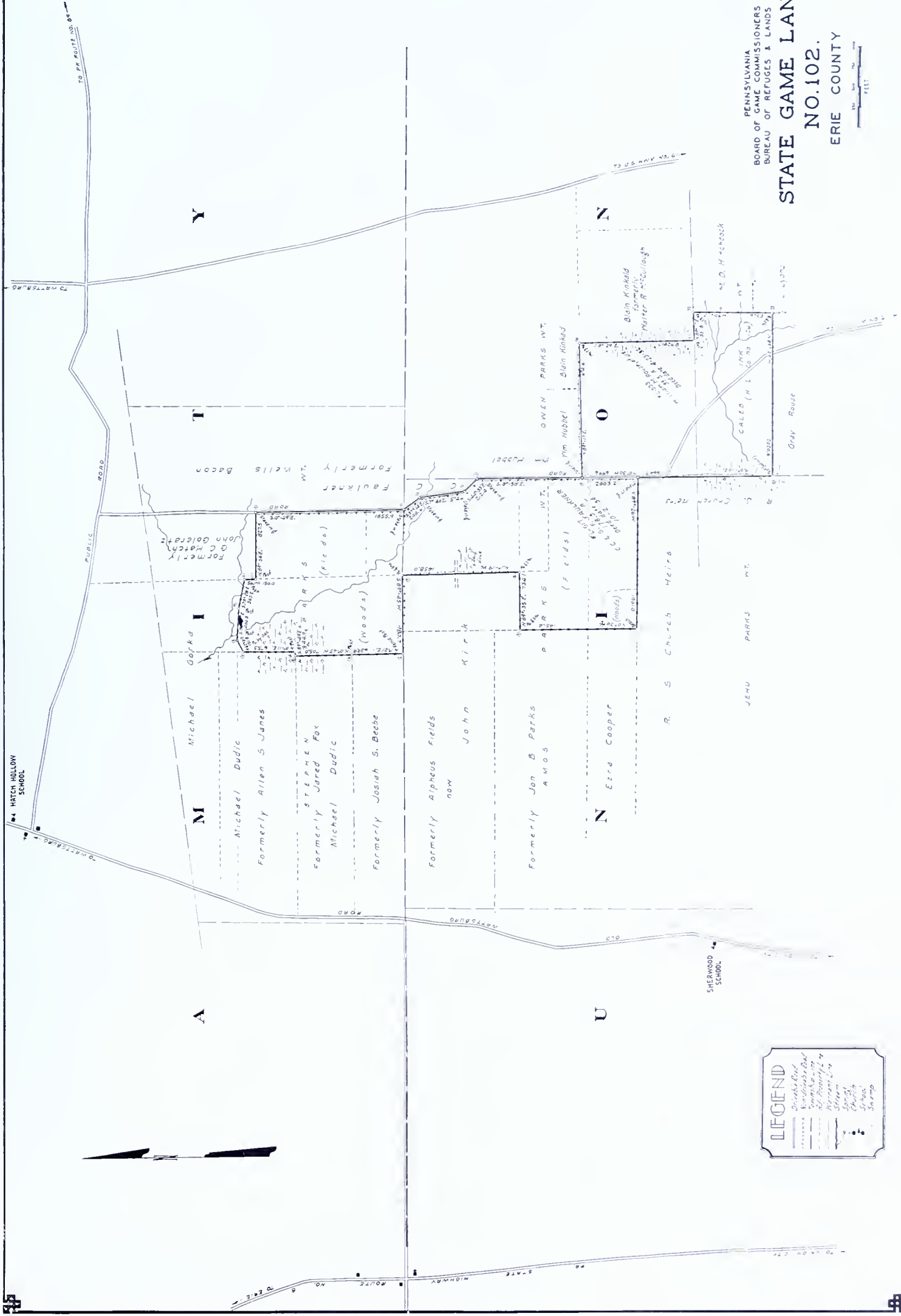
"Why, what's the big idea?" I parried innocently, altho' I knew what he was going to say for I had sized up the situation since emerging from my hiding place.

"Why, man alive," he cried, "three of them were lined up on what's left of that hemlock log. If you had reached around that stump you could have poked them off with your gun barrel."

"So what—?" was all I could say.



STATE GAME LANDS  
NO.102.  
ERIE COUNTY



LEGEND

— Vandike Road

— Trompsburg 1922

— 21. Pooters 1922

— Kroonvlei 1922

— Spreem

— Spreem

— Church

— Spreem

— Spreem







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# PENNSYLVANIA GAME NEWS

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Notify the Editor immediately of any change of address. Such promptness on the part of the subscriber will greatly facilitate the handling of the NEWS.

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## LOOKING FORWARD

PENNSYLVANIA'S GAME LAWS are recognized as being among the best in North America. Many other States have adopted various fundamental features of Pennsylvania's laws, and their sportsmen, like ours, have reaped great benefits therefrom.

While good laws alone are not enough to assure proper wildlife management, they do play a very vital part in every game administrative program.

But changing conditions bring new problems. As they arise steps must be taken to meet them. To continue provisions in the laws which were enacted to fit certain situations twenty years ago, and which now no longer prevail, is just as foolish as it is to repair and continue in operation a worn out building, or factory, or automobile.

Why should the sportsmen of any State, or the Game Commission, be hampered with obsolete and conflicting provisions in the law when the conditions for which they were enacted no longer exist?

The present Pennsylvania Game Code was enacted fourteen years ago. While still very good, it has been amended so frequently in the meantime that it reminds one of an old barn with a lot of new shingles stuck all over its roof in an effort to patch the larger holes. In the process of these amendments, many inconsistencies have crept in. As one well known legal authority recently put it, "The Game Code is quite out of gear."

During the past year the Commission has attempted to do the best it can under present legislation to launch new programs which, it is believed, will materially benefit all sportsmen, especially the small game hunters in the farm regions. While a fair degree of progress has been made, with improved legislation these and other forward-looking plans could be expedited to benefit both large and small game.

The organized sportsmen are in accord with the Game Commission's desire to keep its operating machinery abreast with the times. They have been demanding various changes in the law, with new approaches to pressing problems. They have felt that the Code should be revamped in its entirety to further simplify and modernize the statutes under which the Commission operates.

After weighing the numerous recommendations made by sportsmen throughout the State, the Commission has decided to submit to the coming session of the legislature a revised Game Code. Among some of the important features of the draft to be submitted shortly will be:

1. Provision to reestablish the rotating or staggered terms for members of the Board, which prevailed prior to 1927, as recommended by the sportsmen, to assure on the Commission at all times a number of experienced men who through their knowledge and experience are invaluable in shaping and continuing sound policies.
2. The recommendation already considered by the Federation of Sportsmen's Clubs, and most of the organizations not yet affiliated therewith, that the resident hunting license fee be increased to \$2.60 in order that the Commission may have sufficient unobligated funds to carry out its present policies on a broad scale. The oft-repeated recommendation

that all hunting licenses be issued under the supervision of the Game Commission to reduce cheating, with power to eliminate those who are unfit to handle firearms, will likewise be included.

3. The present power of the Commission to revoke hunting licenses under certain conditions has worked exceptionally well. The wide-spread sentiment in favor of extending these powers in an effort to reduce the careless use of firearms in the field, including appropriate punishment for those who use firearms to hunt while intoxicated, or who destroy personal property or assault landowners, will be included in an effort to break up unsportsmanlike practices and further to reduce needless hunting accidents.
4. The present universal sentiment against carrying loaded shotguns and rifles in automobiles and other vehicles will also receive attention as a safety measure.

5. A provision to give the Commission adequate control over those clubs which rear game for shooting purposes on their own lands.

6. Hundreds of sportsmen who killed game by mistake have deposited the entire penalty with an officer of the Commission, half of which was later returned where the circumstances warranted. This tendency toward better sportsmanship should be further encouraged by a provision which will allow such persons to deposit only half the penalty, subject to review by the Commission. Now the good sportsman who acknowledges his mistake must

forego the use of half his money for a number of weeks.

7. Sentiment generally is in favor of a slightly longer training season for dogs in the springtime, in order that those who desire to cooperate with the Commission in the feeding of game during the month of March may be encouraged, also to permit field trials for another month without a special license.
8. The present law with reference to game lands and refuges needs to be modified and improved in order that the Commission may set up more cooperative farm game projects, also more specific legislation under which special game breeding areas, without hunting grounds around them, may be created from which to trap large numbers of rabbits, pheasants and other game for stocking purposes.
9. The question of giving the Commission full regulatory power to revise bounties from time to time, as changing economic conditions, fur prices, and the prevalence of predators may necessitate, has long been recommended. It is believed that this improvement should no longer be delayed.

The foregoing major items are typical examples of what can be done through a revision of the Game Code.

It is recommended that every reader of the GAME NEWS give these matters earnest consideration, and convey his views relative thereto to his representative in the Legislature so that when the revised draft of the Code is ready for presentation it may be adopted promptly. It is imperative that the sportsmen agree promptly on all major legislative proposals if they are to receive recognition by the 1937 Assembly.

**The cover this month was designed to show an approved method of placing corn in the woods for game. If every sportsman would take a few ears with him on his Saturday afternoon hike, this massive job of feeding the game would be greatly lessened and a marked improvement would be seen next year in the hunting season.**





Farm game species can be increased by food and cover such as shown on the above State Game Lands.

# We must INCREASE

**T**HE game species of a state are those animals and birds which are able to exist in the wild without a great deal of human assistance. They are classified as such under the game laws, and protected accordingly. Their food consists principally of what they are able to find in the forests and in and along the edges of fields. They endure because they are able to find sufficient food and to evade their enemies, although their death rate, due to predators as well as humanity, is very great.

Supplementing their own ability to care for themselves, is the undertaking of Game Commissions to afford them certain sanctuaries and as much protection as game funds are able to provide, as much added stocking as they can make possible, and some artificial feeding, predator control, and limited hunting. Game, whether native or farm reared, naturally selects its own locality in which to breed and live, following its own instincts in this respect.

## *Limited Seasons*

While the reproduction of artificially reared game has proved useful and successful, its natural reproduction must be depended on after distributing it for stocking. Therefore, if we would have more game, we must protect it in its effort to increase itself in its selected locality, and, if possible, endeavor to provide more protection, food, and security for it.

Above all, there must be instituted a proper control over the killing of game, by reasonable regulations and limited open seasons, in order to preserve a sufficient breeding stock from one season to another. Such a program, among other things, requires adequate forest fire protection. The primary problem of Game Commissions might be all summarized in three words—Food, Cover, and Protection.

## *Food and Cover*

In the matter of food, there is much study and experimentation required. The food of game, as mentioned previously, is principally what it can obtain from nature's resources. It adapts itself to what it can find in forest and field, and it subsists almost wholly upon that. In Pennsylvania, however, we are endeavoring to supplement this food in various ways. Subsidiary feeding helps at times, but is not generally practicable because of the difficulty of distributing it.

How far the state should go in the matter of providing additional food and proper cover must depend upon two things; first, the amount of money available for the purpose, and second, the right way to do it. It is the latter which requires study and experimentation. In most game areas there appears to be sufficient food available from May to January then from January throughout the winter, there is often a scarcity. Attention, therefore, must be directed to improve food conditions during that period.

How far climatic conditions tend to increase or diminish game in any area requires consideration. We hear of "favorable" and "unfavorable" breeding seasons, referable to storms and climatic conditions, and their effect upon early breeding seasons. Little can be done in such cases.

In densely wooded areas it is generally conceded that lumber operations usually result in providing both food and shelter, especially when the timber is removed by cutting the larger trees, and leaving the tops and brush from the limbs in the forest. This practice usually opens up some areas so the sun will penetrate and cause a growth of weeds, briars and young tree shoots which provide food for such species as deer, rabbits and grouse. It is generally conceded that the large increase of deer in Pennsylvania was based to a great extent upon the fact that extensive lumbering operations resulted in providing deer food from the young growth which followed the timber cutting. This, together with the so-called "buck law" and the game refuge, brought back the deer very rapidly.

## *Farmer Cooperation*

A suggestion is made of an experiment to be tried out in some of our states. The suggestion runs thus: "A demonstration area is to be selected, organized in cooperation with private farm landowners, for the purpose of regulating the amount of game to be taken; helping the owners to control trespass, gathering data on the amount of hunting in the area, and the amount the area can stand; finding the most practical ways for increasing the crop of

**Adequate revenue is the Keystone around which all efforts to protect and increase game are centered. Without it we cannot hope to accomplish this high purpose.**





Openings made within forest areas on State Game Lands permit briars and sprout growth essential as game food and cover to develop.

# OUR SMALL GAME

*By J. Q. Creverling*

game in connection with farming, food and cover patches to be established, with sanctuary areas surrounded with woven wire, in which hunting is prohibited; and experimental improvement measures conducted within the area, all to be under supervision of the Game Commission, in cooperation with the landowners."

Perhaps the above is as good a suggestion as can be made relative to farm game areas, the results of which, however, are yet to be determined. The idea of farmer cooperation seems to be a splendid one, and the control of the hunting ought to work out well, when it becomes fully understood. If successful, the experiment may be widened out, and may solve, in the end, the question of the management of farm game areas.

Pennsylvania has now acquired by purchase more than two million acres of forest game lands, under the control of the State Dept. of Forests and Waters in part, and under the control of the State Game Commission in part. These forest areas are now producing an abundance of deer, and are adaptable to the production of several small game species, and bears.

## *Forest Management*

Much attention should now be given to the proper management of these forest areas. They form a wide range for public hunting, and in this are most desirable, if properly managed, and if sufficient funds are available for the purpose. Proper management of these large areas will receive attention from the Game Commission, and it is hoped that the best practical method may be evolved.

The writers today, on the subject of conservation, are developing and stressing a spirit of cooperation, therefore creating a healthful sentiment. They are also stressing decent sportsmanship. It takes cooperation and public sentiment to accomplish important objectives. It also takes revenues which may be properly applied. In

general, the sportsmen must expect to pay for the sport of hunting and fishing if they hope to perpetuate them.

Game Commissions can only work within their monetary resources. As a general thing, a widespread public sentiment will be followed by efforts to provide the necessary resources to put into effect what the general sentiment deems desirable. A widespread cooperation, among the sportsmen particularly, is necessary to success.

## *Restocking Necessary*

After years of observation I am fairly satisfied that the restocking of depleted areas is a good method of increasing game. To this end, the game farm, for producing new stock, notwithstanding its limitations, is a real asset. The purchase of game for release in depleted areas is also a good thing to encourage.

It often happens that a depleted game area may be restored to production by releasing stock in it. This is true of the pheasant, the quail, the turkey, the rabbit, and the deer. Money spent for this purpose is more likely to produce better and quicker results than spending it for other purposes. However it must be conceded that there is no specific remedy that will fit every area or condition, and that stocking where enough breeding stock prevails is useless. The subject has a wider aspect. All the efforts that are made to increase and protect the game are useful, and as many as are thought practical should be tried out and pursued as available funds warrant.

## *Sportsmen Can Help*

Cooperative efforts, whenever made, are also useful. Local sportsmen's organizations are beneficial. The game sanctuary is necessary. Predator control is important. Emergency game feeding is essential. Planting of food trees and shrubs, creating cover areas, even though small, is to be encouraged. Creating widespread sentiment for game production and protection is valuable. It is in the aggregate of these many efforts that we may hope to increase game to insure its perpetuation.

Much already has been done to provide food and shelter for game in our forest areas. In a bulletin prepared by our Bureau of Refuges and Lands entitled "More Food for Upland Game,"

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# Just WHAT

By F. J.

**A** DICTIONARY definition of vermin is "Any noxious or disgusting animal such as rats, mice, weasels, lice, bed-bugs, etc." Such a definition was without doubt made to apply to those animals which were directly "noxious and disgusting" to man at a time when such animals were much more of a problem in and around the habitations of man than they are now.

Since the time in our history when the sportsman first imposed bag limits on themselves, a somewhat different idea of "vermin" has come into common use. This may be expressed with reasonable accuracy as "any animal that preys upon other animals of greater worth to man." In the northeastern United States this definition has come to include the birds of prey, fish eating birds, rats, mice, skunks, weasels, opossums, raccoons, wildcats, foxes, groundhogs, all the snakes and a few fish such as the carp, gar-pike and sometimes the common sucker.

Skunks, opossums, raccoons and foxes have in some states been removed from the vermin list since their direct value to man as fur-bearers and for sport greatly exceeds the harm they are supposed to do. Sportsmen and farmers alike have made the lives of the "vermin" animals a perilous adventure from beginning to end.

After long continued study by zoologists the conclusion is becoming very evident that the net results of this persecution is slowly accomplishing exactly the opposite of that which it is intended to accomplish. Nature has been found to be exceedingly complex and the more it is studied the more the student respects the complexities and the less he is inclined to tamper with them. It is to the field naturalist with his biological training as a background and his great experience in the observation of wildlife that we should look for a comprehensive, reasonable and up-to-date wildlife policy.

Apparently without exception field naturalists and zoologists in general state very definitely that vermin extermination is being carried altogether too far. Once and for all, anyone who has anything at all to do with our outdoors should learn that the fact that an animal eats a game bird, songbird, bird's egg or a toad or fish does not necessarily condemn that animal.

The question should immediately be asked "What else does it eat and in what percentages?" The answer to this question, of course, does not determine the status of a species but it is a start which few hunters have made. The blissful ignorance of the real meaning of "balance of nature" and the widespread slaughter of predatory animals that is going on now is bound to have serious repercussions in the game population, agriculture and forestry, and on wildlife in general.

Let us examine some of the conclusions of our field zoologists. In the first place the population of predators in a natural set up is very definitely regulated by the population of the animals on which they prey. When predators become too numerous in any



Wildcats are decreasing noticeably and should be given protection.



The wholesale slaughter of hawks should be discouraged. Too many beneficial species are killed.

area, or when their prey becomes scarce, these predators move to a new area. This natural balance is broken however in the case of those predators such as the house cat and barn rat which feed most of the time on the food supplied by man and make raids into the field occasionally. These predators are heartily condemned by all naturalists and our wildlife would be better off if they were entirely exterminated.

But, our native predators seldom become too numerous in any area. Did anyone ever find a half starved predator? The fact that almost without exception they are sleek and well fed is very good evidence that there are not too many of them. Any over-abundance moves out of the area or is weakened and very soon killed by other predators.

Our native predators without exception destroy a large number of animals considered harmful from the viewpoint of man along with the beneficial. Thus none of them are all bad. Reliable studies of the percentages of different kinds of foods taken have been made for only a few of them. We know fairly well what the different kinds of birds of prey eat. We know very little about the food habits of the rest of our predatory animals. Also food habits of a species may vary widely in different localities. The common crow is a beneficial bird in well wooded regions. He never becomes too abundant in such regions and being a native species fits perfectly into his environment. It is only where man has stripped off the forest and given the crow a big advantage that he really becomes a pest.

We have in the eastern United States a large and varied fauna



# *is* VERMIN *Trembley*



**What greater menace is there to our small game than the half-starved, half wild house cat?**



**Foxes and other predators should be properly controlled but never exterminated.**

of small, native mammals, the various species of wood and field mice, wood rats, shrews, chipmunks, red squirrels, and others. These are the most prolific of our warm blooded animals. Where there is still a reasonable balance of nature left these small mammals do not do any great harm. But once the predator check is removed their increase will be very detrimental to agriculture, forestry and especially bird life. At the present time the State of Michigan is considering the importation of predators to control the red squirrel. Several hawks, weasels, foxes, wildcats and the larger snakes prey upon red squirrels. Red squirrels are very destructive to bird life. The proper control of forest insects depends upon birds. Due to the ignorant killing of predators, a series of changes have occurred which has upset the balance of nature in the Michigan forests much to the disadvantage of the forests. The growing of healthy trees and the shooting of hawks seems quite unrelated but they are very definitely related as is all the rest of nature.

Recently I stumbled onto what seems to be a similar case in our own Pike County. I was talking about the Pike County wildlife with a keenly observant fire warden, a man who has spent nearly all of his long and vigorous life in the Pike County forests. In discussing his work he made the statement that with all our improved methods of forestry, fire control etc. his strip of forest is going backward every year.

The statement seemed to have a great deal of significance and I went back through that forest to see just what he meant. He is very definitely right. It is a sorry looking forest. Insect life

abounds in it and the trees are riddled with borers and the leaves in tatters from leaf eaters. Scarcely a tree that does not have a display of galls and other pathological growths.

It is easy to explain the sorry plight of the trees but the cause of the superabundance of destructive insects is not so apparent. For my own part I am very inclined to think that it is the lack of rattlesnakes, strange as it may seem. This region used to harbor literally thousands of rattlers. I have kept rattlers in captivity for years and have found them to be rodent eaters supreme. I have never had a rattler eat anything else except rats, mice, young rabbits and squirrels. There are still rattlers in this region but their numbers are nothing as compared to twenty or even ten years ago. This must mean a great increase in rodents and a consequent decrease in bird life, although it is not to be taken as a proven truth. It will have to remain a reasonable but unproven thesis until someone does some real scientific work on the subject.

There is another relation between predators and the animals on which they prey which is usually overlooked. The reason why our present day game birds are the fast flying, wise creatures they are is because their ancestors for hundreds of thousands

of years back had to be wise and fast flying or be killed by the predators of their time. All the weaklings were weeded out.

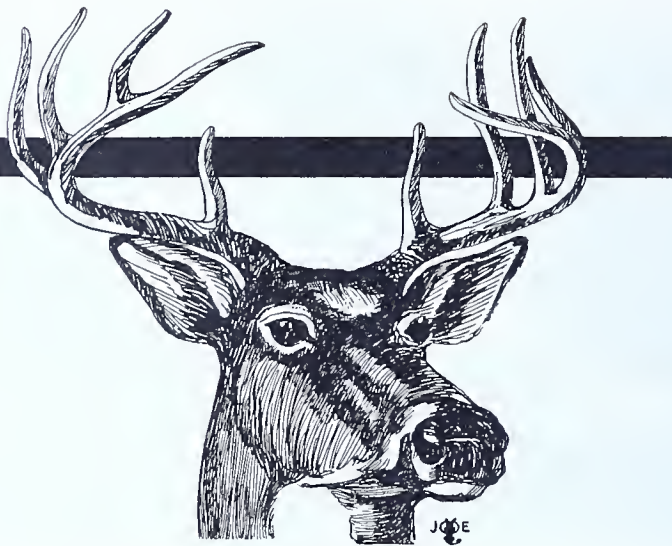
We now know very definitely that in any species of plant or animal hereditary weaknesses crop out from time to time. In nature these weaknesses always disappear since any individual harboring them is killed by some predator and thereby its line of descent cut off. This is an unchangeable law of nature just as old as life itself. Man has nothing to put in place of it.

The extermination of predators means the slow but sure degradation of the species on which they prey. Sportsmen in their hunting accomplished quite the opposite of this law. Where is the man that is not proud of getting the biggest buck or cock pheasant or the biggest fish? Really, every gunner who believes in killing predators should spend his hunting hours killing runts so as to partially take the place of the vermin he kills.

Contagious diseases (caused by microorganisms) are controlled in the same way in nature. Any animal that catches some disease soon becomes weakened and falls easy prey to a predator. One of the best examples of this is the disease called tularemia among rabbits. It is one of the most highly contagious diseases known. Apparently it is always fatal among rabbits. Man is susceptible to the disease and it is about 17% fatal in humans. Since it is so highly contagious it would seem that most of our rabbits would be wiped out by it in a short time. Doubtless they would be if it were not for hawks, owls, foxes, etc. ready at any time to do away with any weakened individual and thereby stop farther spread of

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"The saga of a phantom buck and how old Thad Techary  
"got even."

By CHARLES WETZEL

**W** E WUZ loafin' down at the store where th' boys meet every evenin' to play checkers, chaw terbacker, talk about huntin' and fishin' an' th' wimmen. I almost fergot them. It wuz th' second day of deer season, and even a stranger comin' in th' store would've known that somethin' unusual wuz in th' wind. Everybody wuz talkin', no one wuz playin' checkers; Mush Heimback wasn't sleepin' in his reglar place on th' counter; Dote Wessel wasn't cussin' the world in general; Ira, th' storekeeper fergot t' wait on th' customers 'til Lottie, his wife, hissed in his ear: "Now you tend t' business 'stead o' standin' there gabbin' with a lot o' shiftless hunters, who ain't got nuthin' better t' do than t' roam around th' hills."

Th' cause of all the excitement wuz that in th' afternoon Thad Techary, th' Capt'n of our gang o' hunters, missed "Old Barney," the fantom buck, five shots—three of 'em broadside no more'n twenty steps away. An' did th' boys razz Thad! Honest I'm tellin' ya, I never seen a man so mad in all my life before.

Thad's the kind of feller whose allus playin' jokes on others, but can never stan' t' have any played on him. Th' meaner th' boys talked—real insultin' like—the madder Thad got. Honest, I'm not kiddin' ya, he was ready t' do murder. He stomped off down th' mountin', ragin' an' terin' his hair, an' swearin' he'd never hunt with sech a bunch o' men again. I felt kinda sorry fer Thad, an' yet in a way I couldn't blame th' boys. Th' disappointment wuz turrible an' everybody wuz tired from beatin' scrub oak all day an' climbin' over th' rocks. I jest got t' tell ya about it.

We had set a trap fer old Barney an' hed cornered him in Buck Notch—ya' know thet little dip in th' gap? Well, it looked fer sure 's if we wuz goin' t' git our revenge at last. We wuz slowly closin' in on him an' everybody was feelin' happy. Charlie Ernst told me afterwards he felt like singin', "I'm headin' fer th' last round-up." An' then, bust my buttons, ef that ol' devil didn't up an' escape!

It wuz gittin' t' be uncanny th' way thet buck allus got away. Weird er supernatcheral is probably better words. Th' mountaineers from back in th' hills claimed he wuz "hexed," hed an evil spell cast over him, an' th' only way he could be killed wuz with a silver bullet. Th' city slickers who came each year with high hopes o' baggin' th' buck an' as regularly departed cussin' th' ol' hellion, ridiculed th' idear of th' evil spell, but admitted th' buck bore a charmed life. Everyone who ever seen Old Barney agreed on th' follerin' points: He wuz an immense deer, light gray in color, with a split rear hoof, an' an enormous rack o' horns.

Well anyway, after the excitement an' talk hed died down, we set aroun' in th' store waitin' fer Thad to show up, as th' biys wanted t' razz him some more; but Thad wuz still riled fer he never appeared all evenin'. An' thet wuz peculiar too, him bein' one o' th' steddier o' th' bench warmers. "Regulars" we called 'em.

"It looks 's if Thad wouldn't be aroun' t' hunt tomorrow," sez Dewey Aikens, one o' th' ol' timers.

"He'll be all right in th' mornin'," sez Dan Hasslinger. "Let's go home."

The next mornin' was bitter cold an' after waitin' fer Thad a reasonable time, we elected Dan Hasslinger as temporary Capt'n an' set off.

On each side o' th' valley th' mountains rose up in long gray

walls. A hint o' snow wuz in th' air an' our breaths came in steemy gasps as we started climbin' t' th' top. Flame-colored leaves swirled in an early mornin' wind, an' Buck Notch, high in th' distance, 'peared faint an' blurred in th' mist thet hung over th' gap. Along th' trail, on a hickory limb, a buck had stropped his horns, an' farther along, Dan pointed to a fallen pine thet th' bears had ripped apart searchin' fer ants.

Dewey was laggin' way back in th' rear an' couldn't keep up th' pace with us younger fellers. I just got t' tell more about him fer he's one of our characters. He talks slower'n molasses in January an' allus wears a heavy pair o' felts, winter er summer. It don't take no man long t' find out what makes him walk so slow—it's them heavy felts he's allus draggin' around. It wasn't often thet Dewey hunted with us, fer he wuz gittin' up in years. Most o' th' time he hunted with th' "home guards"—all older fellers who took things kinda easy like; or else he snuk around his peach orchard before sunrise waitin' for th' deer t' git out. He et more'n three ordinary men an' in th' afternoon usually snuk off to his shanty in th' orchard an' made potato cakes.

Well, when we reached th' fire lane on top o' th' mountain, we stopped t' wait up fer Dewey. Finally, he appeared, his shoulder saggin' under th' weight of his heavy antique rifle. His huntin' coat in th' back bulged suspiciously as if it might contain a young fawn—but every feller knew it wuz grub—good solid grub. Everything about Dewey was heavy an' solid. He wuz a solid citizen.

Dan gave his commands in a low voice. He wuz a hard hunter an' this mornin' our hopes wuz high as we jumped aroun' tryin' t' keep warm, while waitin' fer th' men t' git settled on th' watches an' crossin's. Then, after twenty minutes Dan give the signal t' start, an' with blarin' horn we commenced th' drive.

All day long we combed th' mountains; drive after drive we made an' th' only excitement we hed wuz when a doe almos' run over Dewey.

"I wonder where Thad is," sed Ira, the storekeeper an' squire, late in th' afternoon as we loafed around waitin' fer th' men t' git located on th' crossings. "Wherever he is, he's up t' no good," sez Dan as we started on th' drive.

Then about a half hour later near Buck Notch—all hell broke loose!

First come th' heavy roar of Dewey's 45-75, follered by th' sharp spiteful crack of a high powered rifle. Fellers, I'm tellin' you, thet wuz welcome music! We all stood quiet an' still. Then came a cracklin' noise o' broken twigs an' Old Barney an' two does came runnin' over a hogback. Every feller in th' line wuz shootin'! Higher up on th' hill, Dewey's rifle was belchin' black powder smoke, till ya couldn't see him fer it. It wuz awful excitin'! Goose pimples wuz all over me!

Then th' firin' died down, tho' th' dull heavy b-o-o-m-m o' Dewey's rifle still ekoed along the mountain! Finally Dewey run out of ammunition an' we all run down to th' end man on the line. Old Barney hed again escaped an' without a scratch, fer



we couldn't find a drop of blood anywheres. Ira swore he hed crippled him an' didn't want to leave the trail, but finally gave up as it wuz gettin' dark. Then just as we wuz gettin' ready to begin th' long tramp back to town—Thad burst inter view, pantin' an' all excited like.

"You fellers shot a doe, an' it's going ter cost ya a hundred bucks apiece," he exclaimed.

Ira got kinder pale around the gills. He claimed all along he hed crippled Old Barney.

"What in heck are ya talkin' about?" demanded Dan.

Thad excitedly explained thet he wuz stump huntin' and hed run across Jim Corn an' his deputy examining th' doe; an' they told him thet unless the guilty party surrendered, th' entire crew o' us would be liable to a fine of a hundred dollars apiece; besides they wanted each man in th' party to make a clean breast of th' whole affair.

"Dammit, don't ya fellers believe me yit? Come along up here a little higher and you'll be able to see Jim an' his deputy on their way to th' justice of th' peace," sed Thad, kinda angry like an' eyein' Ira hard.

Cold beads of sweat wuz appearin' on Charlie's forehead, an' he was shakin' like a leaf.

"Come on, fellers, let's go along," sed Dan, only half convinced.

In th' dim an' fadin' light, two figgers could be seen hurryin' towards town, Dan got out his field glasses, lined 'em up and sed, "It's Jim all right, but I can't make out the other feller. It looks kinda like thet sneak Giles Wollen, who's goin' t' get pinched at spotlightin' one of these days."

"Thet's Jim's deputy," sed Thad hastily. "Now if you fellers don't believe me yit, walk over here a little ways an' I'll show ya th' doe."

Ira wuz growin' paler an' paler, an' when we come to th' doe, he almost collapsed.

"This looks bad," sed Dan nervously. "Ira you claimed ya hit one so th' responsibility is yourn."

"Listen fellers, you know I wouldn't shoot a doe. I'm th' justice of th' peace here an' it'll look bad if I admitted I done it." Ira was almost cryin'. We all felt sorry fer him, fer it was an axident, pure an' simple, as none of us would violate th' law.

Then Dan sed, "We'll all chip in an' help pay th' fine as we're all huntin' together."

"Thet's darn white of ya, Dan," sed Ira gratefully, "Listen fellers, I'll give \$10.00 to anyone who claims he shot 'er," an' with these words, he produced a roll th' size of which would choke a horse—peeled from it two five dollar bills, then looked eagerly around—" \$10 is a lot of money 'specially in these hard times," he added, temptin'ly holdin' it in an outstretched hand. Hard as times wuz, no one wuz keen on earnin' \$10 so easily, so Ira miserably took th' blame on his shoulders.

"It'll look better ef we take th' doe in with us," sed Dewey, th' solid citizen.

"Thet's right," agreed Dan. "Let's cut a pole."

In th' rapidly approachin' darkness, we begun th' steep walk towards home. Two men carried th' doe an' another walked 'long-side to stiddy 'er. It wuz four miles to town an' we all worked shifts—long, hard shifts—in carryin' the doe in. Thad tried his best to cheer us up, but wouldn't lend a hand, cause he wasn't huntin' with our gang anymore.

"After th' way ya fellers treated me yesterday," he said, "I feel as I've helped enuf already. Ef it weren't fer me, all of ya would haf ter pay \$100."

"I know, Thad," sed Ira apologizin' like, "an' I'm awful sorry."

"All right," sed Thad partly mollified. "We'll say no more about it."

The last mile wuz agony. It wuz dark as pitch an' th' doe seemed to way a ton; she kept swingin' from side to side an' twice knocked over Ira who wuz tryin' to stiddy 'er. Brush whipped our faces; rocks lay in our path; an' when at last th' lights of town twinkled through th' nite, we all breathed a sigh of relief. Then Dan called a halt, an' we all gathered 'round.

"Fellers," he sed, speakin' slow an' quiet, "we're gettin' close to town now an' if we go through th' main street every Tom, Dick an' Harry'll stop an' ask questions. Now I suggest thet we take th' alley through town to avoid meetin' anyone an' to send scouts out ahead to warn us of anyone in our path."

"Thet's right," all of us agreed. Then Dan sent two men out ahead with instructions to whistle in case they seen ennybody an' in this manner we continued th' journey.

Like habbitual criminels who haunt th' dark side streets, we made our furtive way through th' town. Somewhere back in the hills, th' deep bayin' of Boone's long eared hound hung mournfully on th' air. It wuz kinder creepy. Th' trees wuz ghostly an' except fer the dull glint on th' shingles, th' barns wuz shrouded in shadders from a fadin' moon. We trod in these shadders an' pressed tight against th' buildin's whenever a low whistle sounded ahead from th' scouts.

In th' alley back of Ira's place, we dropped th' doe, then Dan an' Thad snuk up to th' store to reconnoiter an' to git th' lay of th' land.

"Fellers' we're in fer it," sed Dan in a low troubled voice as they approached. "Everybody in town's in th' store an' Jim, the warden's there, too."

One could see Ira's face, even in th' dark, gittin' pale agin. He had bin pleadin' with us all th' way in to take th' blame off'n his shoulders an' had raised th' price up to 20 bucks.

"I'll pay \$25, spot cash, to th' man who claims he shot 'er," groaned Ira piteously. "Fellers, I'm gettin' desprit. If ever I needed a hooker of shade mountain dew, it's right now. Wait a minit."

"I'll go along an' see thet ya don't take too much," sed Thad, with alacrity follerin' Ira inter th' barn where th' jug was hid in th' haymow. Fortified with three stiff shots of shade mountain dew, Ira got more composed and sed, "Let's go in an' git it over with. I just wished I hed some cloves en sen-sens," his thoughts on his wife Lottie, th' president of th' village W.C.T.U.

Thad sed, "Fellers, my suggestion is that Ira an' I go in first. Jim's a good friend of mine an' after Ira confesses, I'll put in a good word fer him. Then th' rest of ya fellers come in, one at a time—make a clean brest of it all an' tell him how sorry ya are thet it happened."

"Your a true friend, Thad," sed Ira feelingly. "This is goin' ter be an awful ordeal an' I'm glad your goin' along. Let's go."

"There comes th' squire now," someone yelled as Ira an' Thad elbowed their way through th' crouded store.

"Your jest the man I wantter see," sed Jim th' game warden to Ira. "I bin waitin' two hours fer ya here." Ira, very red in th' face, floundered about, then stammered, "Jim, I'm awful sorry 'bout all this an' I'm willin' to assume all th' blame of shootin' 'er. Th' others in th' crowd hed nothin' whatever to do with—"

"Yes," chimed in Thad, before th' puzzled warden could get in a word, "Ira didn't know he shot a doe until he found it. I'm sure

(Continued on page 24)







By  
**RICHARD GERSTELL**

*Continued from Last Month  
Conclusion Next Month*

#### EFFECTS

**H**AVING discussed the history, method of operation and cost of the Pennsylvania bounty system during the twenty-year period from April 15, 1915 through May 31, 1935, in last month's issue, the next logical procedure is to study thoroughly the effects thereof.

The bounty system has produced several marked results which have points both good and bad. Each will be fully discussed in the following paragraphs in order of their importance.

##### 1. As a Control Measure

Since the principal purpose for the payment of bounties has during the past twenty years been to control predators for the protection of game, it seems not amiss to discuss first the predator control effected by the bounty system.



# The PENNSYLVANIA

## HERE IN IS PORTRAYED THE EFFECTS OF

Possibly the control just mentioned may best be seen by making a detailed and separate study of the reactions of each species during that period wherein it has been placed within the predator classifications. Accordingly, this report will be carried forward species by species, and to follow the discussion readily the reader will find it advisable to refer frequently to the graphs contained in Figure I.

A. On Goshawks. Beginning in 1929, a bounty of \$5.00 was offered for each goshawk killed between November 1st and May 1st following.

Since the species has been on the bounty list a comparatively short time, past records will not give a particularly full picture of the effects of a bounty on the birds, but certain facts are quite evident and of considerable importance.

Section A of Figure I shows the number of goshawks annually presented for bounty payment from 1929-30 through 1934-35. It will be noted that the graph shows no tendency toward any regular graphic curve. A total of 454 animals were presented for payment. The greatest number, 172, was recorded during the fiscal year 1934-35; the smallest, 28, in 1930-31. Other totals were at various points between the two extremes just mentioned and the annual average was 76.

Though not covered in this report, the figures for the fiscal

year 1935-36 show that more goshawks were presented for bounty in that one year than in all the six preceding years, to total being 701 birds. The explanation of this phenomenon is quite simple.

Only a few goshawks breed in Pennsylvania and the scattered pairs annually propagating within the Commonwealth probably do not total one hundred individuals. All nest in the northern counties of the State which represent the southern limit of the species' breeding range. Each winter a relatively small number of birds migrate into the upper section of the State from the extensive breeding grounds farther north. At more or less regular intervals of from eight to fourteen years, however, there occurs during the winter months a major southward migration of goshawks, and in such years unusually large numbers of the birds winter throughout the wooded sections of Pennsylvania, returning again in the spring to the northern breeding grounds. Quite probably the answer to the cause of migration lies in the varying food factors presented by certain cyclic wildlife conditions.

A southward migration of goshawks occurred during the winter of 1927-28 and many of the birds were observed within the





Examination of the graph will disclose the fact that from 1915 through 1921 bounty fees were paid on 26,223 mink, the annual average being 4,340 animals. The numbers presented varied from year to year with a high of 6,022 in 1916-17 and a low of 2,270 in 1919-20. The irregularity of the curve shows that the bounty probably influenced the killing and control of the mink population to no appreciable degree.

C. On Red Foxes. The red fox was on the bounty list when the present system was inaugurated and the species remained thereon during the twelve-year period from 1915 through until the end of the fiscal year 1928-29. The reactions of the animal under the bounty payment may be seen in Section C, Figure I.

A study of the chart will reveal the fact that 56,156 hides were presented in claim for bounty during the twelve-year period, averaging 4,011 individuals per annum. The rate per animal remained constant at \$2.00 with the largest presentation, 6,046, made in 1927-28, and the lowest, 2,408, in 1919-20. It will be noted that at first the number of foxes presented varied from year to year, but that the general tendency seemed to be toward eventual reduction. The curve levels off starting with the sixth year as if the animals might be held under control.

# BOUNTY SYSTEM

## A DETAILED STUDY OF THE BOUNTY SYSTEM

State. Designed to control the damage wrought by the hawks on certain game species, the goshawk bounty was instituted in 1929, but in the years immediately following there were no great southward migrations of the species, so the number of birds killed and presented for bounty was small. In the winter of 1935-36, however, a heavy migration took place and the net result of the same was the record payment of that year.

Obviously, the payment of bounty for the destruction of goshawks within the State of Pennsylvania has not, and never will, result in the control of the species even within the Commonwealth. A relatively high bounty in effect during the summer months might well result in almost complete extinction of the resident breeding stock, but the winter migrations would still continue and it is in those years that the goshawks make their greatest inroads on the game population.

B. On Mink. A bounty for the killing of mink was paid during the first six years of the operation of the bounty system. The rate paid was \$1.00 per animal and the number of animals annually presented is shown in Section B, Figure I.

but the series of rises beginning the ninth year and culminating in the peak of 1927-28 again seems to indicate that the species was not controlled by the bounty.

D. On Wildcats. During the one hundred and seventeen year period from 1819 until the present time, the wildcat has almost constantly been included on the Pennsylvania bounty lists.

At the outset of the present system, the premium paid for wildcats was \$6.00 each and during the year 1915-16, 862 cats were presented for payment. The numbers presented during the following two years show a rapid drop followed by a slight rise the fourth year. In spite of a two dollar increase in the rate paid per animal, the number of presentations again dropped the fifth year and remained fairly constant during the fourth-year period ending in 1922-23. In 1923, the rate was increased to \$15.00 per head and during 1923-24 there was presented a total of 617 specimens, a peak exceeded only by the record year 1915-16. Through 1927-28 the totals presented varied from year to year, though a tendency toward reduction was again evident. In 1928-29 the presentations reached a low of 278 individuals. The number sank still lower to 190 in 1929-30, and during the following five years remained almost constant, never rising above 211 or below 155, with an average of 184.

The above figures, together with the curve of the graph, clearly



indicate that the payment of a relatively high bounty has brought the wildcat under absolute control in Pennsylvania. Furthermore, the all-time low of 97 animals presented in 1935-36 indicates that the animals within the Commonwealth may even be on the verge of temporary or permanent extinction.

E. On Grey Foxes. Section E, Figure I, shows in graphic form, the number of grey foxes presented for bounty during the twenty-year period stressed in this report.

The total number of animals presented from 1915-35 was 129,923, giving an annual average of 6,496 individuals. It will be noted, however, that a far greater number of specimens were presented from 1923-35, when the bounty rate per animal was \$4.00, than from 1915-23, when the rate was only half as much. Detailed computation will show that the average number of individuals presented from 1915-16 through 1922-23 was 4,283, with a high of 5,393 and a low of 3,068. On the other hand, the 1923-35 average was 7,999. The high for the period was 9,980, while the low was 6,458 and for each year the total presented was greater than that of the peak year under the \$2.00 rate. In conclusion, therefore, it may be said that an increase in the bounty rate has increased the number of grey foxes annually presented for bounty payment, but as yet the species shows no evidence of being controlled by the bounty.

F. On Weasels. Since approximately two-thirds of the monies during the last twenty years expended for bounty claims have been paid for the destruction of weasels, it is deemed advisable to study most carefully the extent to which the payments may or may not have controlled the species. Again, the reader is referred to Figure I, showing in Section F the number of weasels annually presented for payment.

A grand total of 1,044,884 specimens were presented in claim for bounty from April 1915 through May 1935. The annual figures vary widely from year to year, with a peak of 88,578 in 1933-34 and a low of 22,583 in 1924-25. The annual average for the period was 52,244, and it is through a study of annual averages that the general trend of presentations may be learned.

If the twenty-year period under consideration be divided into four equal spans of five years' duration, the annual average figures for the spans are found to be as follows:

PERIOD	ANNUAL AVERAGE PRESENTATION
1915-1920 .....	36,816
1920-1925 .....	49,029
1925-1930 .....	54,707
1930-1935 .....	68,423

From the above figures it can be seen that the trend of presentations has been more or less constantly toward a general increase in the annual averages.

The trend toward increase and the number of presentations apparently have not been greatly influenced by the rate of payment. During the first three years under the current system, the rate per animal was \$1.00 and the payments varied appreciably from year to year. In June 1919, the rate was raised to \$2.00 and the number of

presentations was increased by approximately 19,000 individuals. One year later, however, the rate was reduced to \$1.50, but the presentation again showed an increase which was approximately 6,000 larger than that received under the \$2.00 rate. In 1923 the original \$1.00 rate was restored, accompanied by a drop to a point approximately 6,000 individuals less than presented under the last year wherein the \$1.50 rate was effective. Under the restored \$1.00 rate, the presentations reached both the record low of 1924-25 and the all-time high of 1933-34.

The general trend toward an ever-increasing annual average has with one notable exception been statewide. This fact may best be seen by examination of the annual average presentation figures for six groups of three counties each, picked at random



Immature Goshawk.

from six different sections of the state as shown below.

GROUP	ANNUAL AVERAGE PRESENTATION			
	1915-1920	1920-1925	1925-1930	1930-1935
1. Northeastern Counties (Luzerne, Pike, Wayne) .....	1,559	1,968	1,950	2,863
2. Southeastern Counties (Berks, Chester, Lancaster) .....	1,824	2,263	2,659	4,579
3. Northcentral Counties (Bradford, Sullivan, Tioga) .....	2,448	2,687	2,377	3,137
4. Southcentral Counties (Bedford, Blair, York) .....	2,021	2,388	3,055	3,101
5. Northwestern Counties (Erie, Crawford, Venango) .....	3,490	5,924	5,661	7,374
6. Southwestern Counties (Allegheny, Greene, Westmoreland) .....	1,135	1,719	2,236	3,589

It will be noted in the above series of figures that each group of counties shows a general tendency toward an increased annual average as the years have passed with the exception that the three groups of northern counties all show in the third period a reduction from the second, while the same tendency is not evidenced by the southern groups. It appears, therefore, that at sometime during the 1925-1930 period, some form of natural reduction was suffered by the weasel population throughout the northern-half of the State, but the control effected apparently was readily recovered from even under the stress of a constant bounty program.

While the general tendency toward an increase in the annual average number of weasels presented has been statewide, the

figures just compiled indicate that the increase has been more rapid in the southern counties than in those to the north. By simple computation, it is found that the nine southern counties produced during the 1915-1920 span 39.9% of all presentations; during 1920-1925, 38.8%; during 1925-1930, 44.1%; and during 1930-35, 45.8%.

The two points just mentioned may be clearly seen where the statistics for any two or three counties from the northern and southern half of the State are compared. Also, since the graph presented shows no tendency toward any general decline or state of stability, it appears that the bounty system has not to any noticeable extent, if at all, controlled the weasel even though two-thirds of the system's cost has been expended in payments on the species.

A summary of the control effected by the system on each of the species involved would seem to indicate that as a predator control measure, the payment of bounties has proven generally inefficient as it has placed under control only one relatively small species population, while its effect on five others has been negligible.

## 2. As a Protection to Game.

Having discussed the effects of the bounty system as a control measure, the next logical step is to proceed with an investigation of its value as a game protection agency because, as already pointed out, the system was instituted "to control predators for the protection of game."

It is a well-known fact that at times various of the so-called predators do make appreciable inroads among certain game populations, but to discover the exact extent to which such depredations are carried on and to measure the beneficial effect of controlling the predatory species involved is in most instances a physical impossibility.

If it were possible to determine the exact, or even approximate, numbers of predators killed due to the bounty and for other reasons, and from that figure to compute the population totals for the species in question, it might then be possible to determine the effects of the removal of certain percentages of various predatory species on the related game populations.

The important point, however, is that the numbers of various predators annually presented in claim for bounty do not give a true, accurate, or constant index of the status of the predator populations for the year because the number of animals presented is in addition to current densities also controlled by two or more additional factors, including climatic and general economic conditions.

The first step in attempting to discover the extent to which climatic and general economic conditions enter into the presentation of animals in claim for bounty is to note the claim statistics presented in Section G, Figure I.

It will be noted that from 1921 through 1935 a total of 416,020 claims for bounty were presented. The number shown varies greatly from year to year, but for the fourteen-year period under consideration computation proves the annual average to be

(Continued on page 15)





Upper right: Mrs. Martha Souter Shearer, Montoursville, Lycoming County, set a record for veteran sportsmen to shoot at. Here she is with 146 lb. bear, four rabbits, and a fox, her second this season. Last year she killed a fine buck.

*Photo Courtesy Williamsport Grit.*

Upper left: Lee Borgadus, checking deer tag as Maj. Nicholas Biddle, Game President, also of the Quaker City, looks on.

Lower left: Game Protector Carl Benson examining big game tag from bear killed by H. L. Buchanan. Reading from left to right are Protector Benson, Game Commissioner Robert Lamberton, Charles Wagner, and the lucky man himself.

*Game Commission Photo.*



Center: Good deer territory along Route 6 between Galeton and Coudersport, Potter County.

Below: Student Game Protector examining illegally killed deer.





# Your Game



Left: Deer killed on Wind Ridge, Lycoming County, by William Hughes, member of CCC Camp 145.

*Photo by Wm. Drake.*

Center: Seth Gordon, Secretary of the Game Commission; Grover Ladner, Attorney General, and Leon "Lucky" Holtsizer, displaying a fine ringneck killed by the latter in Southeastern Pennsylvania.



Lower right: William J. Platt, well known Philadelphia golfer with another nice ringneck.

Bottom left: Twelve point buck killed by Paul Crawford (at right) Hanover. Eight point buck killed by William Snyder, Hanover, (at left). C. E. (Wimpie) Caler, camp cook, sharpens up the old knife.







Left: Frank Larkins, left, and Jimmie Young, Western Pennsylvania hunters, had unusually good luck.

*Photo, Pittsburgh Sun-Telegraph.*

Right: John C. Hardt, Gibsonia, scored by but one hit but he was satisfied.



# news in pictures



Left: Deer hunting the modern way. Ohio sportsmen invade Pennsylvania's deer woods by the trailer express.

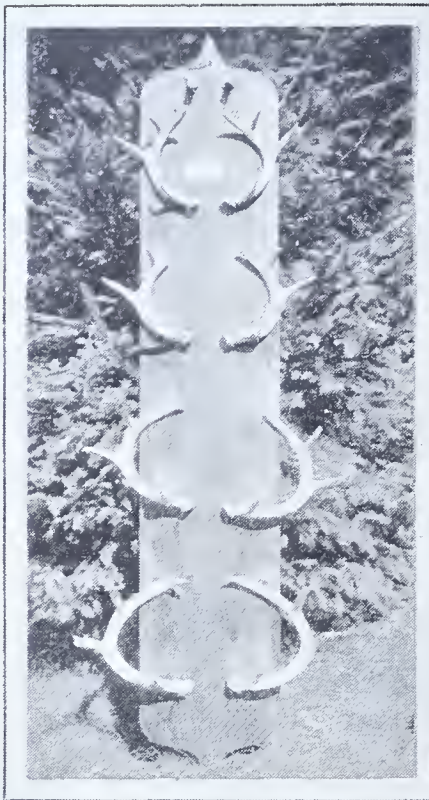
Below: Members Salt Run Camp, Lycoming County, hang up five beauties. Kneeling left to right: Front Row: M. C. Yoder, J. W. Steele, H. B. Leidy, J. W. Burge. Standing: L. T. Cupp, C. Ade, C. L. Newcomer, R. Douty, R. Stoker, and "Pop" Weller.







1



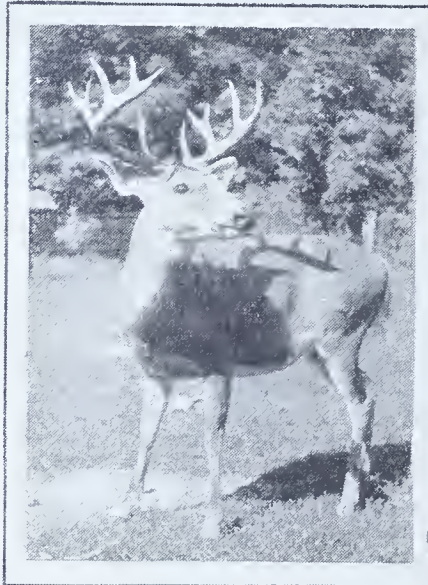
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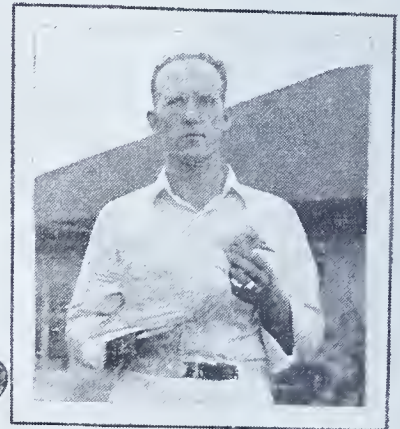
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9



8



10

1. J. R. Shoffner, of Timblin, Jefferson County, says a rifleman does not kill woodchucks in the woods, but the digger does. A rifleman does not destroy holes, but the digger does. A rifleman does exterminate them in the cultivated fields where they are a nuisance and menace. 2. Refuge Keeper Wm. G. Matthews, Westmoreland County possesses these fine antlers all shed from the buck shown in the picture below (5). 3. Game Protector Leslie Wood, of Tioga County, holding one of 45 Reeves Pheasants presented the Game Commission by Jesse Ellison of Antrim. 4. Eugene Johnson, Lewisburg, Union County, with 320 lb. black bear this 18 year old boy bagged in Lyeoming County. 5. See caption 2. 6. "Oscar" tame buck fed at camp of Boyd Cornelius, Cameron County. It thrived on pancakes. 7. Note the deformed antler of this year old buck in the velvet. Photo by Refuge Keeper Wm. G. Matthews. 8. Sportsmen of Glen Lyon, Luzerne County, started their feeding program early. 9. Wm. Pottgeiger, Hershey, with albino crow. 10. Members of the Presque Isle Sportsmen's League, Erie, Pa., took to snowshoes in order to answer the game's SOS.



# THE PENNSYLVANIA BOUNTY SYSTEM

(Continued from page 10)

29,716. A comparison of the curve presented in Section G with that shown in Section H, representing the amounts of the total annual payments, will reveal the fact that the curves are almost identical, thus indicating that the average amount of each claim presented is for all years practically constant. Detailed analysis finds the average for the fourteen-year period to be \$3.16 per claim.

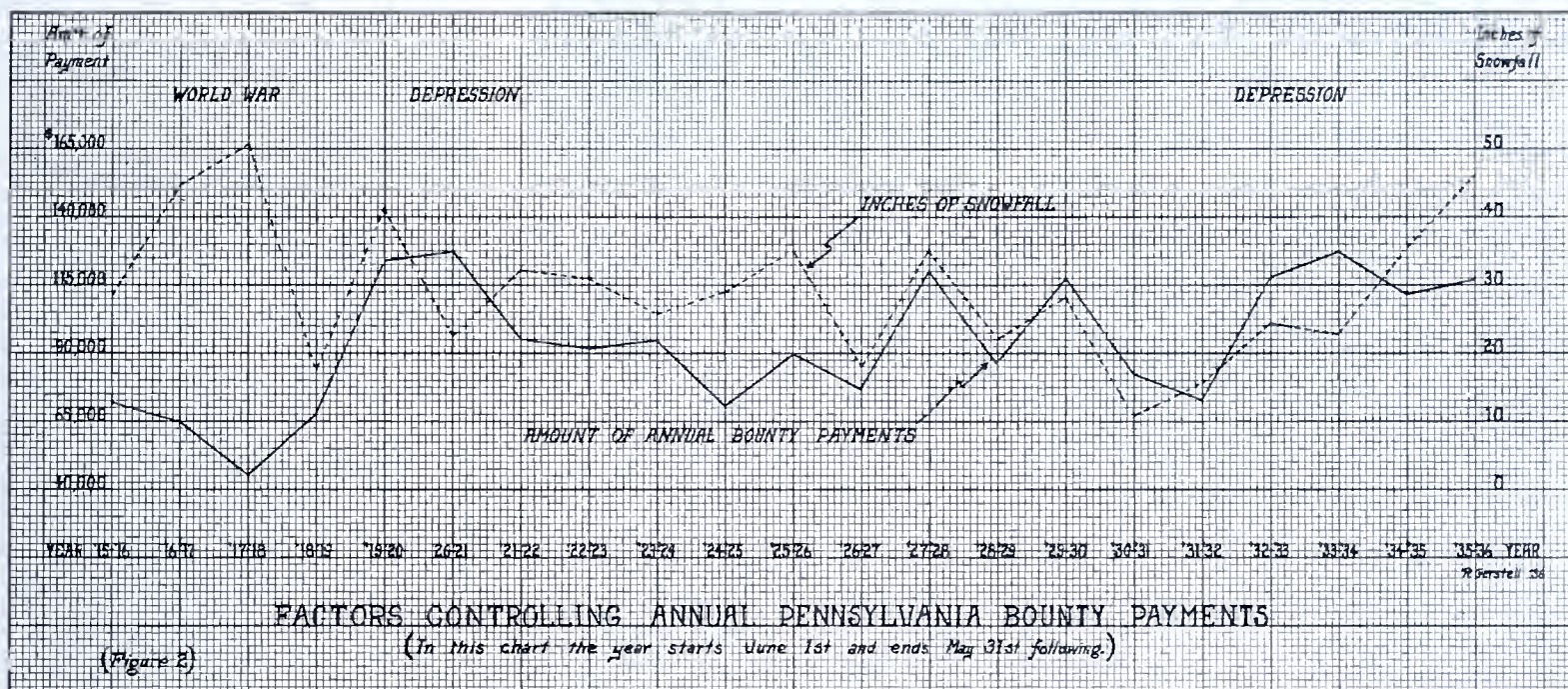
Although the average amount of each claim remains practically constant when consideration is given only to yearly figures, careful computation will reveal that during each year the monthly claims vary widely both in average number and amount, but that the degree of variation during the several months of each year is approximately the same throughout all years. The variables in question may be readily ascertained from the following table.

ber 1st through December 15th, the fact remains that the great percentage of animals presented for bounty payment are taken by traps during the winter months.

The claim table just given also will reveal the fact that during the November to March period the average amount of the claims presented is higher than at other times of the year. This is undoubtedly due to the fact that slightly over 86% of all foxes, approximately 88% of all wild cats and practically all goshawks are presented during the months in question when furs are generally prime. Thus, it appears that many of the bounty claimants are interested in both bounties and fur values; but it also is true that the great majority of claims are weasel claims, pure and simple, because the average amount of each claim is, even during the winter months, appre-

the trapping of the various fur-bearers and it may, therefore, be concluded that trapping conditions are controlled by climatic conditions, especially snowfall.

From the records of the United States Weather Bureau, it is a simple matter to determine the amount of snowfall during each year, and by comparing the bounty claim and payment figures with the snowfall figures, the relationship between the two may be clearly seen. Figure II presented herewith shows in graph form the statistics in question for the twenty-one year period from 1915 through 1936. In this instance, as in all other yearly figures contained in this report, each annum is taken on a fiscal year basis beginning June 1 and ending May 31 following, with the exception of the 1915-21 period whereunder the first year runs from April 15, 1915 to November



## AVERAGE MONTHLY CLAIM STATISTICS 1925-1930

MONTH	AVERAGE NO. OF CLAIMS	% OF ANNUAL TOTAL	AVERAGE AMOUNT OF CLAIMS
June .....	647	2.2%	\$2.60
July .....	931	3.1%	1.94
August .....	994	3.3%	1.68
September .....	598	2.0%	1.91
October .....	680	2.3%	2.42
November .....	2,796	9.0%	2.80
December .....	6,299	21.1%	3.09
January .....	6,773	22.7%	3.71
February .....	5,424	18.6%	3.79
March .....	3,527	11.9%	3.99
April .....	986	3.3%	3.48
May .....	475	1.5%	2.55

A study of the above table will reveal the fact that over 83% of all bounty claims are presented during the five-month period from November first through the following March. Also, since even casual examination of the skins presented for bounty will show that relatively few of the animals have been taken by means of a gun, and since it is known that the great majority of such specimens are killed during the open gunning season, which usually extends from Novem-

ber 1st through December 15th, the fact remains that the great percentage of animals presented for bounty payment are taken by traps during the winter months.

From the points just brought out and by simple mathematics, the fact can be determined that well over 80% of the monies expended for bounty payments annually go to persons trapping for fur and bounty during the winter months. In view of this fact, it is logical to suppose that trapping and general economic conditions, which largely determine fur market prices, should play the major roles in regulating the number of bounty claims annually presented and hence the amount of the yearly bounty payments, because the average amount of the separate claims has been shown to be practically constant.

To establish the validity of the supposition just made is not a difficult matter. It is well known that when the ground is bare, only the more experienced trappers can with any appreciable degree of success locate and trap weasels, but with the snow on the ground the presence of the animals is easily detected and, tracked to the vicinity of the den, they readily fall prey even to the novice. Snow conditions also aid in

30, 1916 and other years from December 1 to November 30 following. The figures on inches of snowfall were obtained from the Government Weather Bureau. They are in actuality the figures only for the city of Harrisburg, but they give a figure by meteorologists considered representative of the State as a whole.

Examination of the chart will show that the curve representing the annual amount of snowfall and that representing the amount of the yearly bounty payments are very similar. In general, years of heavy snowfall are accompanied by high bounty payments and, conversely, years of little snowfall show low payments. In many instances the percentage of variation is very nearly equal and there are only three major differences encountered. The first occurs from 1916 through 1918. That, of course, was the period of the World War. Many of the persons who would normally trap were over-seas and all others were employed at high rates of pay. The second difference will be noted in 1920-21, when with approximately 23 inches of snowfall the bounty payments reached a total of \$128.-

(Continued on page 24)



# REGULATED SHOOTING AREAS

BY NICHOLAS BIDDLE



Seth Gordon, left and the author reading the permit.

**I**N order to observe regulated shooting areas and public hunting grounds in operation in small game districts of other states, Seth Gordon and the writer recently made trips to Connecticut and New Jersey during the open hunting season of these states.

We first visited the regulated shooting grounds in the vicinity of Hartford with Mr. Arthur L. Clark, Superintendent of the State Board of Fisheries and Game. The properties are posted with signs furnished by the State Fish and Game Board, which state that permits are required to hunt or fish the property, and were signed by the land-owners. The point that impressed me was the fact that the signs did not contain the usual notice of "No Hunting."

In order that we might observe how the regulated plan worked without being identified as game officials, Seth Gordon and I went to the farmhouse on the property in our hunting togs, and knocked on the kitchen door. The woman of the house was doing her Monday washing, but took time out to hand us the book of permits, and we each filled in one with our names, license number and address. At the end of our hunt, we returned the permits to the house, having first recorded all game taken.

The second area we visited was the Lyman Farms, where we secured our permits from Mr. Lyman, the Manager, in his farm office. Before identifying ourselves, we questioned him in regard to the regulated plan, and he seemed to think it a good one, inasmuch as the State prosecuted the violators, while the individual had the control of the number of shooters allowed on the property. Incidentally, there had been sixteen gunners ahead of us when we reached the Lyman property, and it was only due to the fact that Seth Gordon had his Pennsylvania License on his back that Mr. Lyman decided to issue the permits before he learned our identity, as he wished to extend a courtesy to a hunter from Pennsylvania.

In addition to obtaining a permit, other regulations prohibit shooting within five hundred feet of buildings, toward buildings or livestock, leaving cars in bar-ways or blocking roads, leaving gates open, bars down, breaking down fences, or causing damage to other property, crossing land under cultivation, leaving rubbish, building fires or carrying rifles using ammunition larger than calibre-22 long rifle. A violation of any of these regulations subjects the hunter to revocation of license. This farmer-sportsman program has the following objectives:

I. To protect rural property owners against acts of vandalism and lawlessness connected with hunting and fishing which have occurred too frequently in the past and which have caused many property owners to close their lands to all hunting, fishing and other trespass. The sportsmen of Connecticut will no longer tolerate those who commit such depredations and who thus

tend to destroy the sport of hunting for all.

II. To establish game management practices on such regulated areas so as to permit the game thereon to increase by natural methods, and to so regulate the annual kill that an adequate breeding stock will be left for seed. Experience has proven that these matters cannot be left to chance as they have been in the past.

III. To provide better shooting conditions and greater opportunities for hunting to those who are willing to observe reasonable regulations designed to protect property owners and to conserve the game supply.

Approximately 120,000 acres are now operated under this plan. In addition the State has 32,821 acres of State-leased public shooting grounds. There is also an area of about three hundred acres set aside in the Farmington Public Shooting Grounds for the exclusive use of women, with a woman warden in charge, who is thoroughly qualified and prepared to give helpful instructions to women in the handling of firearms and bird dogs in the field.

Our trip to New Jersey was made on the opening day of the hunting season, in company with Mr. L. G. MacNamara, Superintendent of Game Management for the New Jersey Fish and Game Commission, and Ben East, the well-known outdoors writer from Michigan.

We first visited the public shooting grounds near Clinton in northern New Jersey, and when we arrived about 8:00 A. M., we found one hundred and ninety-five automobiles parked outside the grounds. If we calculated an average of three hunters to a car, this would make approximately six hundred hunters at one time on the nine hundred acres of public land in this vicinity.

According to Dr. Charles F. Hunter, a member of the New Jersey Commission, who is particularly interested in the public shooting grounds, two hundred and sixty cock pheasants were killed during the first few days of the hunting season on this area, while only eighty cocks were liberated there during the past year. The ground, however, has been planted with strips of feed and cover and old hedgerows have been restored. This is a concrete example of what can be done by proper planting and development of game lands.

New Jersey is gradually increasing the public shooting grounds in small game territory, and at the present time, 8,649 acres of good public hunting and fishing grounds have been acquired and are under scientific game management.

We next visited some of the areas operated under the farmer-sportsman cooperative plan. This land which was formerly posted against hunting and fishing has now been opened to the public and stocked by the Commission. Under the New Jersey plan, permits are not used, but the hunters first obtain permission from the land-owner before trespassing on the land.

The total area as of July 1st, 1936, under this plan, was 129,016 acres, and included in the area are ponds, lakes and streams. Game management has been practiced on some of the tracts such as shelters, food patches and cover, and it has been found that cooperation between the farmer and the Commission on these tracts has increased the supply of game for the sportsmen at a very little additional cost.

I am convinced, from my observation in Connecticut and New Jersey, as well as in other states, that the time has arrived in Pennsylvania when, in addition to creating public shooting grounds, we should extend the farmer-sportsman cooperative plan, which we established this year on a tract in Chester County.

The Pennsylvania plan includes the establishment of 150-yard safety zones around dwellings, as well as small game refuges in suitable locations on farm properties, in all cases where the landowners are willing to enter into such a cooperative agreement with the Game Commission.





A portion of the Cooperative Farm Game Refuge and Shooting Grounds Area in Chester County.

# Chester County Farm Game Project Successful

By W. GARD. CONKLIN

SECRETARY Gordon in the May, 1936 issue of the Game News, in an article entitled "New Small Game Program Launched," called attention to the Game Commission's plans to improve small game hunting conditions, and particularly to provide better protection for farm game species, to safeguard the farmers' interests, and at the same time benefit sportsmen. One of the plans mentioned provided for the establishment of farm game refuges with accompanying acreage open to public hunting, to be set up under provision contained in the Auxiliary refuge law.

One such project was completed in Chester County prior to the opening of the recent small game season and was rather fully described and explained in an article entitled "Cooperative Farm Game Project No. 1," which appeared in the September 1936 issue of the Game News.

The plan worked splendidly and without a doubt proved its worth. The owners of twelve connecting farms in Chester County, totalling 1,507 acres, signed agreements turning over the hunting rights to the Game Commission, with the understanding that about two-thirds of the area would remain open to public hunting. At least one refuge unit was established on each farm, using areas which were not tilled. Woodlots interspersed with grapevines and other game producing plants, in at least one instance an orchard, and in general unused and what might be considered unproductive corners of the farms were used for this purpose. Twelve small refuges comprising an area of 207 acres were completely established by November 2. They range in size from 7 to 50 acres.

Each small refuge was encircled with the

customary strand of No. 9 galvanized wire, and the lines carefully posted with the well-known "Auxiliary State Game Refuge—Hunting is Unlawful" metal signs. Safety zone posters were placed around buildings calling hunters' attention to the fact that it is unlawful to discharge firearms within 150 yards of buildings. Educational posters warning hunters that it was unlawful to leave gates open, break down or destroy fences, or to injure or destroy livestock, and also asking them not to walk over newly-sowed grain, nor to pick fruit without proper consent, were also posted throughout the area.

On the first day of the season, November 6, thirty-five hunters were reported on the open hunting areas, and only one violation of the law occurred. A hunter disregarded the refuge notice and entered the protected area. He now realizes the error of his ways. It cost him \$25.00. Just how many hunters sought sport within the area is not known exactly, but in all probability it reached one hundred.

There seems to be no doubt but that this project was in every way successful. Farmers were pleased with the protection afforded their property, their livestock, and themselves. Not a complaint from them was heard, nor was a single complaint heard from any of the hunters, all of whom seem well pleased with the way the project was handled. This is not a controlled-shooting project, for the only control is in preventing hunting on certain areas in order to protect the seed stock needed for propagation purposes the following year. Hunters were not required to obtain permits to go on the area, but could hunt at will.

Consideration is now being given to improving environmental conditions for game

insofar as this is possible. Just what can be done largely depends on the willingness of the landowners to permit the planting of food producing shrubs, vines and grains, in the refuge subdivisions especially, and whether nearby sportsmen's organizations will cooperate by aiding the Game Commission's efforts. Retreats and shelters of brush, old culvert pipes, etc., have been provided within refuge areas.

This plan should be pleasing to small game hunters as a whole, since it is just about as near the time-honored system of American free shooting as anything could be in these days of concentrated sport and State hunting license fees.

Now since we know the plan will work, the next big job is to set up as many more of these farm game projects as funds permit. Numerous other areas are under consideration in the counties of Bucks, Chester, Delaware, Montgomery, Butler and Washington. No sizeable suitable areas have yet been located in Allegheny and Beaver Counties.

The Game Commission needs the active cooperation of all organized sportsmen's groups to spread the benefits of this farm game plan as rapidly as possible. Sportsmen's clubs can help by reporting groups of available farms containing a thousand acres or more in the above-mentioned counties. Of course, there is no advantage in reporting them unless the farmers are willing to sign the necessary agreements, or at least indicate their interest in the plan. Here is where sportsmen can aid to a very large extent, by selling the idea to the farmer and gaining his sympathetic cooperation. After these preliminaries are taken care of, the Game Commission will send a representative to handle all other arrangements.



Left: David M. Carter, one of the cooperators. His satisfaction is apparent.

Right: Harold Carrol of the Bureau of Refuges and Lands, and two local hunters talking it over.





# CURRENT TOPICS

## TITLE FOR ADDITIONAL GAME LANDS OBTAINED

During November thirteen tracts of State Game Lands passed into the possession of the Game Commission by fourteen deeds of conveyance. The tracts totalled 97,850.2 acres, bringing the aggregate area of State Game Lands to 524,458 acres, located in fifty-two of the sixty-seven counties of the State. The thirteen tracts, in nine counties, were as follows:

### BEDFORD COUNTY, Southampton and Monroe Townships.

The Estate of W. J. Van Horn conveyed 2,561.6 acres, which were added to State Game Lands No. 97, now containing a total of 4,731.6 acres. The new acquisition constitutes ideal small and large game territory, including deer, wild turkeys, grouse, rabbits, squirrels, etc. The purchase includes a number of connecting farms, with about 80% of the area wooded and the other 20% tillable.

### WESTMORELAND COUNTY, Ligonier Township.

Two adjoining tracts of woodland, comprising 2,550.5 acres, were purchased from John E. Beck and Mrs. Jessie R. Boyd. The lands lie just north of the Lincoln Highway within a few miles of Ligonier. Although they do not actually connect with State Game Lands No. 42, the new acquisition will be considered a part of those lands. Deer and certain small game species are reported abundant, and there are several good trout streams within the acreage conveyed.

### LYCOMING COUNTY, McIntyre Township.

The Gray's Run Club conveyed a tract containing 741.6 acres, which has now been designated State Game Lands No. 125. This tract is in good deer, bear and grouse territory.

### BUCKS COUNTY, Nockamixon Township.

Charles H. Bean conveyed 127.8 acres, which hereafter will be considered as part of State Game Lands No. 56, bringing the total of those lands to 1,518.2 acres. This tract contains a large amount of red cedar trees of various sizes, affording excellent cover for game.

### BUTLER COUNTY, Washington Township. By the acquisition of 407.2 acres State Game Lands No. 95 were increased to a total of 1,449.9 acres. The recent purchases were as follows:

Desdemona Vanderlin, 2/3rd interest in	178.2 acres
C. L. McQuiston, 1/3rd interest in	
Heirs of Mary E. Hutchinson, deceased	65.3 acres.
James A. McNeish,	163.7 acres.

407.2 acres.

This is small game territory, although there are a few deer present on the area.

### VENANGO COUNTY, Mineral Township. 369.7 acres were acquired from two grantors, i.e., Miss Fern June Knauss 334.5 acres and the Franklin Trust Company 35.2 acres. These tracts help to square up the lines of State Game Lands No. 39, now comprising 7,462.3 acres. Both tracts were old farms and provide an opportunity for sowing grains to produce game food.

### WARREN COUNTY, Deerfield Township. Miss Blanche Conklin conveyed 99.6 acres which are now a part of State Game Lands No. 86, bringing the total area of these lands to 11,446.3 acres. The new acquisition is partly cleared, and provides an opportunity of increasing game food supply by the sowing of grains.

### ERIE COUNTY, Conneaut Township. A tract of 320.2 acres was acquired from M. F. Bramley and added to State Game Lands No. 101, now comprising 1,240.2 acres. The original purchase of No. 101 lands was from Mr. Bramley. The recent purchase is an old farm with considerable good tillable acreage.

### HUNTINGDON COUNTY, Todd and Carbon Townships. The Harbison-Walker Refractories Company conveyed 672 acres, which have been added to State Game Lands No. 67, now totalling 1,849.7 acres. This is in excellent turkey, grouse and deer territory.

## NEW REFUGES ESTABLISHED

The following recently authorized State Game Refuges, primarily for the protection of small game, were established just prior to the opening of the small game season in November:

**Berks County**—Auxiliary State Game Refuge No. 99, on Maiden Creek in Ontelaunee, Maiden Creek, Richmond and Perry Townships, containing 2,820 acres owned by the City of Reading and used as a source of the City's water supply. The area comprises 1,740 acres of land and 1,080 acres of water. It is well stocked with small game, particularly cottontail rabbits and ringnecked pheasants. For several years the City of Reading and officers of the Game Commission have cooperated with each other, to the benefit of both. The Commission now will be in a position to aid the City still more since it is definitely recognized that sportsmen are thoroughly sold on the refuge idea and will respect refuge posters better than any other poster used in an attempt to prevent hunting. The City of Reading had previously posted the areas against trespass in order to protect their watershed.

Sportsmen will benefit, as they have for a number of years, from the hundreds of rabbits and ringnecked pheasants which have been trapped on the area for stocking elsewhere. The Game Commission thus obtains game for stocking at fairly low cost, and hopes to continue the practice.

A reasonable amount of fishing will probably be allowed within the area except during the months of October, November and December.

**Bedford County**—Primary Refuge No. 73-G, containing 390 acres in the Ravers Gap section in Liberty Township. This is the seventh refuge set up within State Game Lands No. 73, comprising a total of 14,977 acres, on Tussey Mountain in Bedford, Huntingdon and Blair Counties. The seven refuges total 2,660 acres. Tussey Mountain provides some of the best wild turkey shooting in the State.

**Somerset County**—Primary State Game Refuge No. 111 in Lower Turkeyfoot Township, near Confluence, containing 468 acres. This refuge is within State Game Lands No. 111, containing a total of 5,826.3 acres, most of which was purchased within the last year or so. This is good turkey territory and was recently stocked by the Game Commission. Reports indicate that the stocked turkeys are doing well.

**Sullivan County**—Primary State Game Refuge No. 533, containing 814 acres on State Forest land in the Double Run section of Forks and Shrewsbury Townships, not far from the recently created Whirls End Park. This is in good deer, bear and grouse territory.

**Potter County**—Primary State Game Refuge No. 515-C, containing 303 acres on State Forest land in Ulysses Township. The principal purpose of the establishment of this refuge was to provide additional protection for grouse, and bear to a more limited extent. There is now an abundance of deer in that section.

During the recent open hunting season a good supply of all kinds of game found safety in the many refuges created and maintained by the Game Commission. Where a sufficient number of refuges are created there is practically no chance of an overkill

Direct more questions to the "Question and Answer" column. This little department is becoming more popular every day. It will become even more useful if more contributions are submitted.



of game. Seed stock will be left for propagation purposes. Experience in Pennsylvania proves this to be an undeniable fact.

Including the above-mentioned refuges, the total in operation during the last season are as follows: 100 Primaries on State Game Lands 56,580 acres; 81 Primaries on other publicly-owned lands, as State Forests 66,548 acres; 35 Auxiliary Refuges on lands leased from private owners 12,582 acres; 1 Cooperative Farm Game Refuge Project 205 acres; a total of 217 refuges comprising 135,915 acres.

Over 50,000 cottontail rabbits were restocked during the first two weeks of December. This releasing was done much earlier this year in order that the cottontails would have a chance to find homes for themselves before heavy snows came.

This year a new system of restocking was put into effect. The rabbits were shipped to one central point and from there the Game Protectors in the various counties distributed the animals to sportsmen's organizations, which in turn released them under the Protectors' direction.

Carry a hand axe instead of toting a bale of hay when on winter feeding expeditions in the deer woods. Alfalfa hay to feed deer is good but natural browse is much better. Most people make the mistake of placing too large a quantity of hay at one spot. Then the hungry deer over-eat, and frequently become sick.

The most practical way to feed deer in winter is to cut small soft maple or aspen about three-fourths way off several feet above the ground, break them over and leave them lie where they fall. Last winter the Commission recommended this method of deer feeding and the results were excellent.

Before cutting down any tree on State Forests, State Game Lands, or private property, proper local officials or owners should be contacted to obtain the necessary permission to cut food for deer this winter.

Game prosecutions in November, 1936 were less than in the same month in previous years. Most violations occurred in the southern part of the state, particularly the ringneck country of the southeastern counties. The penalties collected during November totalled \$9,296. The decrease in prosecutions is attributed to a much better observance of the Game Laws generally and an increased desire on the part of the sportsmen to cooperate with Game Protectors.

\$11,097.00 was paid out by the Commission for bounty during the month of November, on the following animals: 18 wild cats, 1055 gray foxes, 537 goshawks, and 3922 weasels. A total of 2,998 claims were presented.

Several Albino deer were killed during the past season. Two have been reported so far to the Commission. They were killed by Harold White of Indian Head, Pa., and Roy Beck of Greensburg.

William Spry of Latrobe killed one of the largest bucks ever taken in Somerset County during the past season. The animal weighed 204 pounds and had a rack with 22 points.

A 21 pound wildcat was killed by a deer hunter in Horse Valley, near Chambersburg.

Football tactics were resorted to by Ivan Anderson, of Jeanette in his hunt for deer this season. He stopped a wounded buck by a flying tackle when the animal attempted to escape after being shot. Anderson grabbed the buck by one hoof and was kicked in the chest by the other one. He held on, however, and finally got both of the buck's hind legs in his arms. His

companions finished the struggle with a well placed shot.

A 200 lb. buck with 20 points gave battle to C. E. Harr of Greensburg after he had practically emptied his rifle into the deer. The animal had fallen and Mr. Harr was about to "stick him" when he got to his feet and charged. For about twenty minutes there was a rather serious game of "hide and seek" played in the woods, with Harr resorting to throwing stones as his gun was empty. His companions finally came to his rescue and stopped the little episode with a fatal shot.

Hunting casualties on the first day of the season this year were considerably fewer than on the first day in 1935, but there seems little reason to believe that carelessness was much less in evidence. The improvement apparently was brought about primarily by the new nine o'clock opening law.

The fact that fatalities occurred in spite of the new restriction should be regarded as near-final evidence that hunters, like motorists, need to be called upon to qualify for their licenses.

There is, after all, no more reason for allowing a hunter to carry a gun he does not know how to use intelligently than for allowing a driver to operate a car he does not know how to drive safely.

A tightening of license restrictions would work an unnecessary harshness on careful hunters, but there is no other way of reaching the chronically careless hunter. There can be no

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Over 50,000 cottontail rabbits were stocked in the various counties of the state during latter December.



Sportsmen willingly assisted Game Officials in an effort to release all rabbits before heavy snows covered the ground.



# WITH THE CLUBS

Records of black bears so far reported to the Commission include the following: Earl Filbert, Hazelton, 200 lbs.; Russell Mundy, Johnstown, 400 lbs.; H. L. Buchanan, Franklin, 335 lbs.; William Sutliff, Jonestown, 110 lbs.; Dean Westover, Cambria, 175 lbs.; Ray Howell, Saylorsburg, 150 lbs.; Arthur Newton, Kingston, 125 lbs.; Edward Campbell, Shamokin, 200 lbs.; Harry Nolf, Creekside, 100 lbs.; L. J. Shaam, Shenandoah, 100 lbs.; Theodore Santee, Drums, 200 lbs.; J. M. Stauffer, Selinsgrove, 100 lbs.; Joe Yudeski, Shenandoah, 110 lbs.; R. H. Goudy, Harrisburg, 125 lbs.; L. L. Aurand, Lewistown, 250 lbs.; Russel Struckell, Blairsville, 400 lbs.; Ray F. Gakle, Renovo, 150 lbs.; William Smith, Castanea, 160 lbs.; Charles Pfeiffer, Loyalsock, 121 lbs.; Thomas Ickes, Bedford, 130 lbs.; Dayton Wechtenhiser, Central City, 200 lbs.; Dan P. Slater and Ray Henry, Monaca, 300 lbs.

The Westmoreland County Sportsmen's Association is sponsoring radio programs over Station WHJB, Greensburg, every other Saturday up until April 3, 1937. The Schedule from January is as follows: January 9, I. G. Moyer, President of the Jeanette District Sportsmen's Association; January 23, Ross L. Leffler, Member of the Board of Game Commissioners; February 6, R. W. Hanson, Chairman of the Laurel Hill Trout Nursery Commission; February 20, O. M. Deibler, Commissioner of Fisheries; March 6, W. M. Wright, Retired Division Game Supervisor; March 20, V. M. Bearer, of the Department of Forests and Waters, and April 3, Sam Henderson, Fish Warden.

All sportsmen in the western part of the state should listen in to these programs as they promise to be of much interest.

The Commonwealth Rod and Gun Club, Harrisburg, will present a prize to the Pennsylvania hunter killing the buck deer displaying the most points during the 1936 season. The winner may have the choice of a high powered rifle (value \$75.00) or cash.

All persons wishing to compete must be bona-fide residents of Pennsylvania and must present their deer heads at the club headquarters, 12A S. 4th St., Harrisburg, Pa., for consideration of the judges.

Hunters in the northwestern part of the State have their camps adequately protected from theft through an agency known as the Northwestern Pennsylvania Camp Association.

This association pays a reward of \$100 for information leading to the arrest of anyone caught breaking in or stealing from any of the cabins.

Persons interested in dog trials are seeking legislation extending the time limit for this popular sport. They would like to hold

trials up to April 1, and to run all amateurs stakes on Sundays. These requests are not exorbitant by any means. One thing is certain. If granted they will not be abused.

The Gordon Game and Fish Association, Schuylkill County, recently established a game refuge for deer on top of Broad Mountain, about two miles from town.

This refuge, which is about 800 acres in extent, will be enclosed by wire.

The following announcement was printed for distribution to sportsmen by Black Forest Conservation Association, Coudersport, Pa., during the past deer season:

In the interest of and for the better protection of all law-abiding sportsmen, the office of S. B. Sawyer, Sheriff of Potter County, in the Court House at Coudersport, will be open night and day during the deer season of 1936. Telephone operators will be continuously on duty there and in contact

## REPORT YOUR GAME KILL PROMPTLY.

It is essential that we have this information so we can plan for next year's stocking.

with Game Protectors. Any sportsman wishing to report trouble, violations of the law, or for any reason contact the forces of law enforcement should call the Sheriff's Office, Coudersport 28-R.

## TO STUDY GAME SPECIES

The Technical Committee of the American Wildlife Institute, headed by Dr. Aldo Leopold, professor of game management of the University of Wisconsin, is recommending a study of nine game species to the Trustees for Institute financing, at least in part the species affected will be the western quails, bobwhite, grouse, wild turkeys, pheasant and Hungarian partridge, cottontail, deer and antelope.

The studies will include: How livestock limits the productivity of quail range; Explanation of the degeneration of the bobwhite in New England; The effects of altering the cover and range of western grouse by C. C. C. activities; A study of the Southwestern or Merriam turkeys, and the recession of population vigor among the pheasants and Hungarian of Oregon and New England; Why the general failure of ring-neck pheasants and Hungarian partridges in the South is still a mystery. (A local study of the food habits of deer and antelope. Browse eating game ruins its own range, while seed eating game does not. All over

the country valuable spots of deer range are now threatened with grave injury to both range and deer.) These trouble spots are worst where no predators remain to keep the herd in balance with the carrying capacity of the range; An explanation of why a few antelope remnants have continued to increase until they destroy the carrying capacity of their range, while others dwindle until they disappear.

Besides Dr. Leopold, the Committee is composed of Gardiner Bump, Superintendent of Game, New York Conservation Department; George C. Embury, Professor of Fish Culture, Cornell University; Carl L. Hubbs, Director, Institute of Fisheries Research, University of Michigan; and Herbert L. Stoddard, cooperative Quail Study Association. Their report is to be the basis for a research program financed by the American Wildlife Institute.

## BIRDS FLY NORTH AND SOUTH BUT WHICH WAY IS HOME?

By Frederick C. Lincoln

U. S. Bureau of Biological Survey

Are the birds flying home now, when they go south in autumn? Or is home where the nest is built in the north in spring? There are two opposing theories as to where birds are really at home.

One theory has it that the ancestral home of the birds must be the northern one. According to this view, birds used to swarm over the whole Northern Hemisphere, and as the climate offered them a year-round food supply and suitable breeding conditions, they did not roam, as so many do now. They were like birds in the tropics today, for most tropical birds do not migrate.

But gradually an Ice Age crept down from the Arctic, bringing glacial cold and driving the birds farther and farther south until they were safe in the tropics. When the ice sheet retreated, the birds tried each spring to return to their ancestral homes in the north, but they could stay only a brief time and then winter would freeze up the home land again. So in time migration became a habit.

The other theory, suggesting a southern home for the birds, is simpler in some ways. It assumes that the birds all had their ancestral homes in the tropics. But that led to over-population and all the worries of congestion and food shortage and struggle against neighbors—just the same with birds as with humans.

So, like human immigrants, various groups of birds took to their wings and moved to breeding grounds where competition was less keen. When they flew so far north that they encountered ice sheets, or that winter cold repelled them, the birds retreated south again. In time, the migration became a habit, just as the other theory presupposes.

As yet, neither theory is supported by positive biological data. One fact we can be sure of. And that is that birds began

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# SCATTER LOADS

President Roosevelt truly and most sincerely has at heart the Conservation of wildlife and the natural productions in America, and the position he has taken for conservation exemplifies in the highest degree that he fully realizes what saving the things in nature will mean to future generations.

## STOCKMEN SYMPATHETIC

In Washington and Oregon the stockmen are taking a sympathetic attitude toward wildlife in their plans for range management.

It is recommended that small patches of cover be left uncut around meadows and along ditches for pheasants, sage grouse, and other birds. Eradication of predators and control of rodents along with vigorous enforcement of game laws is specified.

The antelope population is to be preserved, and in considering the grazing resources, provision is to be made for year 'round food for the antelope and other big game.

Libyan arabs are cruelly netting thousands of quail for shipment to the markets of Great Britain, France and Italy. The birds are packed like sardines in compartments so small they can hardly move. This trade is disgustingly cruel and people should know better than to encourage it by paying a high price for the unfortunate little victims.

Three different species of wild boar are found in California. One killed recently by Charles Bentley, well known sportsman, weighed nearly 400 pounds. Its tusks were  $9\frac{3}{4}$  inches long.

The Chukar partridge, California's newest game bird, has been liberated successfully in various sections of that state for nearly four years.

Game officials of Wyoming have drafted a new Game Code for presentation to the next legislature. Wyoming is said to be going forward by leaps and bounds in her game program. More power to her!

Whether airplanes carrying chemical, gas or water bombs may effectively be used in combating forest fires was being tested by the United States Forest Service at the Oakland Airport this month.

The experiments are being conducted under the supervision of F. W. Funke, forest service equipment technician. A high-wing monoplane, equipped with bomb racks and flown by an Army Reserve pilot is being used.

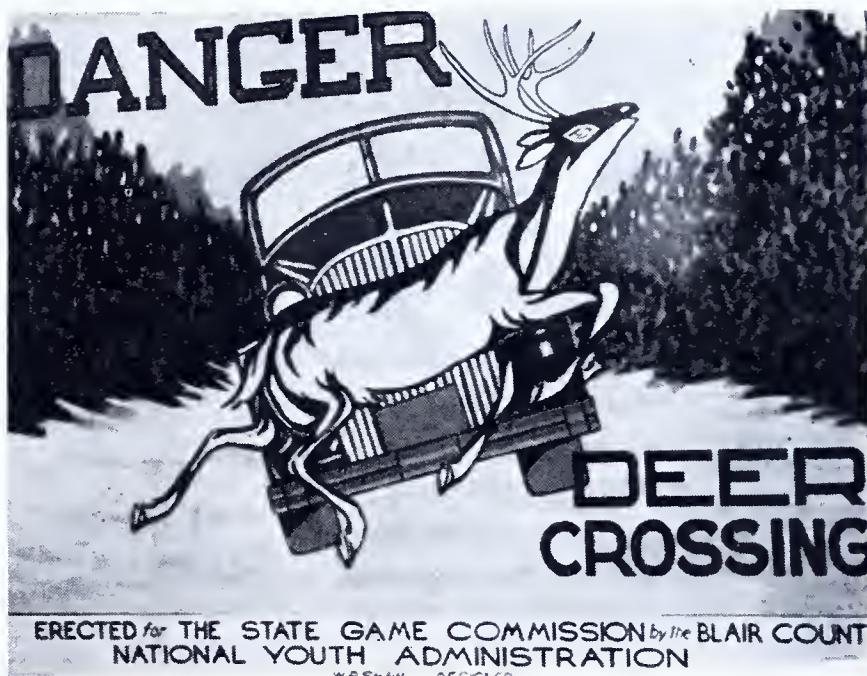
"No report—no license!" warns the Wisconsin Conservation Department in a ruling that no hunting licenses for the 1936-37 season will be issued to sportsmen who have failed to file their annual game census report. Previously less than half of the licensed hunters of that State bothered to help the game restor-

ation program to the extent of filling out the now-mandatory report.

Mountain lions, once almost extinct, are staging a comeback, judging by reports of them in western mountains.

Barn swallows that spend their winters in Brazil fly as far north as Greenland and Alaska for the summer.

That the camera has become an important part of the average sportsman's equipment is seen in the report that an estimated number of 2,000,000 Americans are active photograph fans today. A large part of this army of picture-takers is comprised of hunters and fishermen, who regard the camera as a useful adjunct to rod and gun.



Patrons of Ringneck Field Trials will cheer the announcement that the purse for the Fifth renewal of the Pheasant Dog Futurity has been increased to \$750. All puppies whelped on or after January 1, 1937, from matings duly nominated and properly completed are eligible to entry. Nomination blanks may be secured from the American Field Publishing Co., 222 W. Adams St., Chicago, Ill.

The following is a quotation from an editorial which appeared in the April, 1911, issue of RECREATION.

"The big, difficult thing, that of pulling ourselves together, and pulling all together, until we get game protection out of politics, lies

before us. The interests of the hunters of the whole continent must be combined, for the common good, in an organization that will be representative, one that will be unbiased in its opinions, and one that will strive toward a common aim—continental organization for the benefit of all sportsmen."

"What is needed, and sadly needed, is a parent organization to look after all the state and provincial associations for the protection of game and fish, to look after them and keep them up and doing and working in harmony for conservation."

We need only to look at Pennsylvania's organized forces for an example of this long sought-after unity working for a common aim, "Better Hunting Facilities."

## NYA ACTIVE IN CONSERVATION

Reports from field officers show that the National Youth Administration is rendering invaluable service in helping the game program along. The boys are building feeding shelters, preparing and erecting posters, and carrying on many other activities designed to increase and protect wildlife. The Commission greatly appreciates this cooperation and extends its thanks to all members of the N. Y. A. throughout the State.

The North American Wildlife Conference will be held in St. Louis this year, March 1 to 4 inclusive. Main headquarters will be at the Jefferson Hotel.



## CURRENT TOPICS

(Continued from page 19)

justification for continued toleration of this annual sacrifice of human life on the altars of carelessness.—Easton Express.

Two men were shot and killed in Clarion County in "mistake for game" during the past small game season, one a lad 17 years old and the other a man 64.

The two men responsible for these tragedies were James Sweeney of Clarion and Gus Swartzfager of Buffalo, N. Y. Sweeney was fined \$1000, paroled five years and had his license revoked for a period of five years. Swartzfager is in jail, awaiting a hearing. He has already been sentenced to 77 days in jail in default of a \$77 fine for hunting on a resident hunter's license, failure to display a hunting tag, and failure to sign his license.

Alex Sweigart, Editor of the PENNSYLVANIA ANGLER, reports seeing a covey of 23 Hungarian Partridges in Montour County during the past small game season.

Governor Earle, recently commenting on Pennsylvania's wildlife conservation program, stated, "Ever since I can remember, I have enjoyed wild creatures, and in later years have been a staunch advocate of any measure that would insure their perpetuation and increase. We in Pennsylvania have a wonderful heritage in wildlife of all kinds, and under the present system of management, there no doubt will be an abundance left for posterity."

An unusual number of goshawks is being sent in for bounty this year. Extreme cold weather and a scarcity of Lemming mice, Snowshoe rabbits and other creatures which constitute the goshawk's diet in the north country are no doubt responsible for this winged predator's abundance.

There have been several great influxes of goshawks from Canada, the last taking place in 1926 and 1927, at which time the birds played such havoc with our small game, particularly grouse, that legislation was enacted placing the present reward of \$5.00 upon their heads.

An average of thirty goshawks are being received daily, and stomach examinations show they are still partial to grouse.

### CONTROL THE CROW

The Game Commission is advocating a strong program of crow control this winter. Crows, when present in large numbers, are a serious menace to small game, particularly game birds, whose nests, eggs and young they destroy whenever they find them.

This year dynamite may be used as an experiment in destroying certain crow roosts, a plan already tried successfully elsewhere. The work will be carried on under the supervision of local game protectors. If it proves effective, it may be used elsewhere throughout the state.

The Commission also is very much in favor of the crow campaigns which various sportsmen's associations have organized. Contests of this sort offer the finest kind of sport and create interest among the members of the different clubs.

Plan to get your share of fun out of crow shooting this winter. Remember, however, the purpose is to control, not exterminate, the crow.

During the past year or so there has been considerable agitation against the use of automobiles by hunters on the many miles of dirt roads constructed, and being constructed, on State Forest and State Game Lands by C.C.C. Camps. On the other hand, some hunters object to being deprived of this means of access to hunting territory, giving little or no thought, unfortunately, to the great damage done to dirt roads resulting from the use of automobiles when the ground is wet and soft. The cost of maintaining forest roads under such conditions is prohibitive. Neither the Department of Forests and Waters nor the Game Commission can be expected to have sufficient money to maintain them, and so it seems apparent that the only thing to do is to close them. Those in favor of closing certain roads strongly urge this as a means of preventing

the shooting of game from automobiles driven slowly through forest areas by the hunter who does not want to walk and work for his sport.

The Game Commission has closed throughout the year many miles of newly constructed roads on State Game Lands recently built by the C.C.C. Camps. Gates have been constructed and kept locked, and the roads may be used only for fire protection or administrative purposes. If such protective measures were not taken it would not be possible to maintain the roads for these essential purposes.

Doctor James F. Bogardus, Secretary of the Department of Forests and Waters, in an article which he kindly prepared for the September, 1936 issue of the Game News, entitled "Game Refuges and State Forests," said that his Department was considering the advisability of closing a certain number of the newly constructed roads on State Forest Lands. The decision finally reached was to close them during the big game season of 1936 as an experimental measure. As a result, in the neighborhood of 700 miles of roads on State Forests were closed. The Game Commission would like to know what you think of the plan. Should it be continued or not?



### QUESTIONS AND ANSWERS

Correction: The question "Is it legal to participate in the killing of more than six deer" which appeared in the December issue should read "Is it illegal, etc."

Q. Are waterfowl subject to tuberculosis?

A. Yes, domestic ducks, like domestic chickens, are subject to tuberculosis.

Q. Can woodchucks climb trees?

A. Yes.

Q. Is the canvasback a diving duck?

A. Yes, it is one of the open water ducks and secures the greater part of its food by diving for it.

Q. Is the pintail a diving duck?

A. No, it is one of the surface-feeding shallow-water ducks, feeding by tipping, and commonly called puddlers.

Q. Are any of the following named species of waterfowl now extinct: Ringneck duck, wood duck, ruddy duck, buffle head, blue goose?

A. No, all of these species still exist, although several are much less common than formerly.

Q. Is the sparrow hawk an important enemy of game birds?

A. No. It lives mainly on large insects and small rodents, takes some small birds; on the whole it is chiefly beneficial.

Q. Are woodcock and Wilson snipe two different species?

A. Yes, both short birds, they look somewhat alike, but are different in a number of ways. (Will not breed together.)

Resorting to the more primitive method of bringing down big game, Edgar Oswald, 19-year old Nazareth hunter and Therol Matteson of Corry, discarded their guns for the bow and arrow. Using this age-old device they each brought down splendid bucks. Oswald's deer had eight points and weighed 160 pounds.

Here's a true story from York County: Three sportsmen went hunting, and after being afield most of the day without success decided to ask permission to hunt on what was supposed to be a particularly good posted farm. One of the men left the car and approached the farmer, who was a little dubious about granting the privilege but later agreed "because you were good enough to come and ask."

He made one request, however, that when he was through hunting he shoot an old gray mule which was grazing in the pasture below the house. The farmer said he had been wanting to do it for a long time but never had the heart. The hunter said he would, and calling to his companions in the car that everything was all right, and that the farmer said they could hunt, started off.

They covered every inch of the farm but did not see any game. As they were returning, the hunter decided to have some fun with his buddies who knew nothing whatever about the mule bargain. As he approached the animal, he said: "I'm so darned disgusted that I have a notion to shoot that danged old mule." With these words he approached it and aimed back of its ear. His two comrades laughed at his foolish bit of by-play until they heard the bang and saw the mule drop to his knees. Then they lit out, jumped in the car and beat it, leaving the other poor fellow standing there holding the bag. In the end the farmer had to take him into town.



# JUST WHAT IS VERMIN

(Continued from page 5)

the disease. In 1924 some 22,000 deer had to be killed in California to prevent farther spread of the foot and mouth disease. This would not have been necessary if a normal population of wolves, coyotes and mountain lions had been present in the region inhabited by that deer herd.

We have one predator in the United States which now causes a direct, annual, economic loss to man of two hundred million dollars. This is the barn rat and it is on the increase. Until the present this unmitigated pest has been confined mainly to cities and towns and around farm buildings. The reason he has not invaded our woods and fields is not because he cannot adapt himself to such conditions; next to man he is the most adaptable animal in the world. The only thing which has kept our woods and fields comparatively free from rats is the population of native predators. If the rat ever does invade our open country due to the lack of these predators, we will wish the sky to be full of hawks and owls and a weasel or fox to be behind every bush. He is omnivorous. He can live almost anywhere between the Arctic and Antarctic on the ground, under the ground, in trees, or can take to the water and become fully as aquatic as a muskrat. He is one of the most prolific of all mammals. His cunning often is astounding. Whole shelves of books have been written about him as a carrier of pestilence. Just what protection would our small game have against such an animal if it were not for our so-called vermin? Would it not be better to play safe and leave a normal population of predators where they belong? The barn rat is one of the reasons for the actual breeding of owls in captivity and then turning them loose in Germany.

Such are some of the reasons why naturalists are very much opposed to our present ideas of vermin control. It is time for a new definition of vermin, a definition which will give the idea of a vermin animal as an animal out of place, about the same as a weed among plants. Such animals are the only ones that merit any great persecution. The barn rat, and even the half starved, half wild house cat (English sparrow and starling),

are very definitely such animals. (They are very much out of place. They do not even belong in this country.)

Crows may be considered out of place when they are present in hundreds of thousands as they are in some areas. A groundhog that lives in the middle of a well cared for hayfield may be considered out of place but not the groundhog that lives in a ravine in the woods. A heron or kingfisher is out of place at a trout hatchery but he is not out of place along a lake shore or a woodland stream. The control of such animals should be confined to the places where they seriously conflict with the works of man and then the control should be limited and never equal extermination.

Without any doubt our so-called vermin control campaigns have done an enormous amount of damage to wildlife in general. Very few of the participants know the names of more than half of the animals they kill to say nothing of their food habits. Enormous numbers of beneficial hawks and owls, small mammals and snakes are killed needlessly, much to the detriment of the sportsman, farmer, forester and the species themselves. I have yet to see one good scientific report of any benefits to game having occurred from a vermin campaign.

At one time farmers used to shoot any hawk or owl that became too fond of the taste of chicken. He did not pay much attention to the others. Now each year thousands of hawks are slaughtered by pump guns along their migration routes. This practice is particularly vicious since the great majority of hawks shot are of the distinctly beneficial species. The fast flying bird-killing hawks are much more difficult targets than the slow rodent killing species. From bird censuses taken along migration routes it becomes clearly evident what is happening. The cooper's hawk and sharpshin are holding their own in numbers and all the others are decreasing alarmingly. These two are the only really destructive hawks which we have in any numbers in Pennsylvania. The goshawk is, of course, the game killer par excellence but it is never common enough in Pennsylvania to bother much. It is of interest to note that one of the regions of the North American continent best supplied with grouse also has the greatest supply of goshawks. This region is Nova Scotia. The two seem to get along very well together. The other two bird killing hawks, the duck hawk and falcon, are becoming very rare and the few that remain should be protected by all means.

Fish eating animals have taken a great amount of persecution and in general they are a very inoffensive lot. They do eat fish but the most of them are such fish as suckers and minnows. Since man is removing game fish all the time this is probably a service to better fishing rather than a dis-



service. Remember that suckers and minnows do eat spawn of game fish, and fishing in a body of water can be ruined by an overabundance of these. The killing of a beautiful merganser duck because it eats fish would be ridiculous if it were not so sad. No one as yet has produced any evidence that the extermination of water snakes in a body of water helps fishing one little bit.

Our snakes without any doubt have taken the worst beating of all. For some strange reason it is considered quite a feat for a 150 pound man to beat a 3 pound blacksnake into a bloody mess with a 4 foot club. And there is certainly no reason for this persecution. We know too little about their food habits to form any conclusions at present. We only know that the larger species eat some birds' eggs and young birds and a large number of rodents. They eat birds' eggs only during the nesting season but they eat rodents all summer long.

There is another strong reason for using a little discretion in our killing. There are 7,000,000 hunters in the United States and very likely twice that number of people who simply like to go out and see their animals alive. These people do not wish to see just warblers and sparrows, and chipmunks. They also want to see a big red-tailed hawk, a hoot owl, a mountain blacksnake or even a wildcat. Do we, as sportsmen, have the right to deprive these nature lovers of the chance to catch a glimpse of one of the few remaining wildcats in our woods? I would shoot a bear out of season sooner than I would shoot a wildcat at any time. There are too few left.

Every sportsman should read an article entitled "Diversification of Wildlife" by W. P. Taylor in the Oct. 16, 1936, issue of "Science." Mr. Taylor has summed up in a short, clear article the ideal which all conservationists should strive for. If we turn our energies from destruction to construction, results are bound to follow. We still have enough of our wildlife heritage left so that we can bring back natural conditions, bits of the old American wilderness scattered here and there which will be a source of unending delight to all sportsmen and nature lovers.





### WITH THE CLUBS

(Continued from page 20)

migrating to find their two main requirements—breeding grounds and food.

The spring flight carries migrating birds to their breeding ground. The autumn flight carries them to a safe food supply. But which way is home to the birds we don't know, and I am sure the birds don't know now, either.

Science News Letter,  
November 14, 1936

### RUSSIANS TRACE TULAREMIA OUT-BREAK TO INFECTED WATER

An epidemic of rabbit-fever in Siberia has taught scientists that water can carry the dread tularemia infection, Drs. S. I. Karpoff and N. I. Antonoff of the Institute of Epidemiology and Microbiology report (Journal of Bacteriology, September).

Engaged in harvesting wheat, a whole community of farm workers took up residence in a field "between the cities of M. and T." As drinking water they used that from a river and from a small brook which emptied into it below the point where the river water was obtained. A few days later a larger number of cases of a disease which resembled somewhat the plagues of the Middle Ages broke out among the farmers. In all cases there was swelling of the glands about the mouth and throat, the liver "stood out the thickness of a finger's breadth," and the spleen was swollen and sensitive. The doctors diagnosed the disease as rabbit-fever, but were puzzled about how it could have been spread.

In the United States doctors had discovered the disease to be spread by infected rabbits; in Norway the wild rat was the culprit, while in Russia water rats were guilty. But in this epidemic only a few rats had been seen, and the doctors knew definitely that the affected people had picked up the disease from something eaten or drunk.

Then another fact became apparent. Those who had drunk unboiled water from the brook became ill, but those who drank similar water from the river were quite healthy. Bacteriological analysis solved the problem. The brook water was loaded with tularemia germs, that from the river was clean.

An epidemic of tularemia, acquired from water rats, broke out in the Ural region of Russia in 1928 when a commercial demand for the water rat pelts turned the entire population to the job of catching and skinning them. A lot of infected rats may have been in the brook that was found infected with tularemia germs, although scientific investigators, one month later, did not find any rats in the brook.

Avoiding the newly discovered danger of acquiring tularemia from water is simple enough: Only water that is bacteriologically clean must be used for drinking.

Science News Letter,  
November 14, 1936

The Pennsylvania Federation of Sportsmen's Clubs will hold its pre-legislative meeting, on February 12, at the Capitol.

WHP Radio Station, Harrisburg has offered the Game Commission fifteen minutes on the air every Friday evening for the purpose of disseminating news of interest to Pennsylvania hunters. In addition Ken S.

Thomas and H. A. Redman, WHP announcers have also been putting on some splendid wildlife conservation programs of their own. Such cooperation is greatly appreciated.

### A DAY ON SHADE MOUNTAIN

(Continued from page 7)

it wuz all a mistake an' to show ya thet he hadn't mean t' evade the law—we brung 'er along in."

"Business seems ter be pickin' up," remarked th' warden to Giles Wollen at his side. Giles give a sickly kind of grin—as he uneasily shifted from one foot to th' other.

"Where are th' others," demanded Jim. Then one by one we trooped in, told the warden how sorry we wuz an' hoped he'd be as easy as possible with Ira.

"Since Ira has voluntarily given himself up," Jim said, "The maximum fine'll be \$100, although \$50 of it'll be returned to him. Bring th' doe in now."

A couple of th' boys eagerly sprang to obey, glad to get through with the dirty business. An' isle was quickly formed through th' store an' th' boys came staggerin' in with th' doe. Durin' all this excitement Thad slipped quietly away.

"Why," sed Jim in surprise after removin' a tag from th' deer's throat, "this is the doe I arrested Giles here fer shootin' a while ago near Buck Notch."

### WE MUST INCREASE OUR GAME

(Continued from page 3)

there are many suggestions as to how it may and should be done.

If these suggestions were carried out there can be no doubt that game will increase. The great question is, how to accomplish the purpose by actually doing the things suggested. The best plan will fail, if it is not put into effect. The Game Commission could do much of it, if it had sufficient funds. Without the necessary money, it cannot do it.



*Adequate Funds Needed*

Sportsmen's clubs, here and there, often undertake to do certain of the things suggested, and accomplish some good results. This helps, but these efforts are usually only spasmodic, and endure only for a short time. It will only be done right when the sportsmen of the state are willing to contribute a game license fund sufficient for the Commission to make the necessary provisions for putting into actual effect a long time program for game feeding and reproduction on state-owned and farm land areas of the state, and to lend their moral and physical support to insure its success.

The work of the C. C. C. Camps has been

a great asset to the sportsmen. It is too soon to appraise its complete benefits, but from what has been done, and is still being done, there must necessarily result much lasting benefit to game, and its perpetuation on forest areas.

### THE PENNSYLVANIA BOUNTY SYSTEM

(Continued from page 15)

269.50, a peak only exceeded by the record payment of 1933-34. The year in question was one of general economic depression during which an unusually large number of people depended upon bounty payments to increase their income. The third difference is found in 1933-34, another year of severe economic depression, wherein with approximately 23 inches of snow, the payments reached the all-time high of \$128,981.00. The striking similarity of the 1920-21 and the 1933-34 statistics is almost unbelievable, and it is quite probable that an unusually large number of bounty claims would have been presented in 1930-31 and 1931-32 had not the minimum snowfall during those years made successful trapping practically impossible. Since the three differences just pointed out are accounted for by unusual economic conditions, one a boom and two depression periods, it is only logical to conclude that provided there are reasonable predator populations within the State, the number of animals presented in claim for bounty, and hence the annual amount of payments, will be controlled chiefly by climatic conditions, together with the influence of extreme economic disturbances.

Inasmuch as the number of predators presented for bounty payment is controlled by climatic and economic conditions, the presentation figures may not be generally taken as an indicator of the status of the various predator populations. It follows, therefore, that it is impossible to correlate the interrelationship extant between the various game and predatory species during any given period by comparing the number of predators presented in claim for bounty with the annual game kill, even though the latter is in most cases directly indicative of the relative abundance of game.

On the surface, it would appear that in those falls following winters wherein unusually large numbers of predators were presented in claim for bounty, the game kill might well show an appreciable increase to be accounted for by the heavy predator destruction of the preceding winter. In some few instances, cases such as cited above are to be found, but careful study of the records over periods of ten or more years indicate that the same are merely coincidences and it is impossible to show that the predator kill directly affects the game kill.

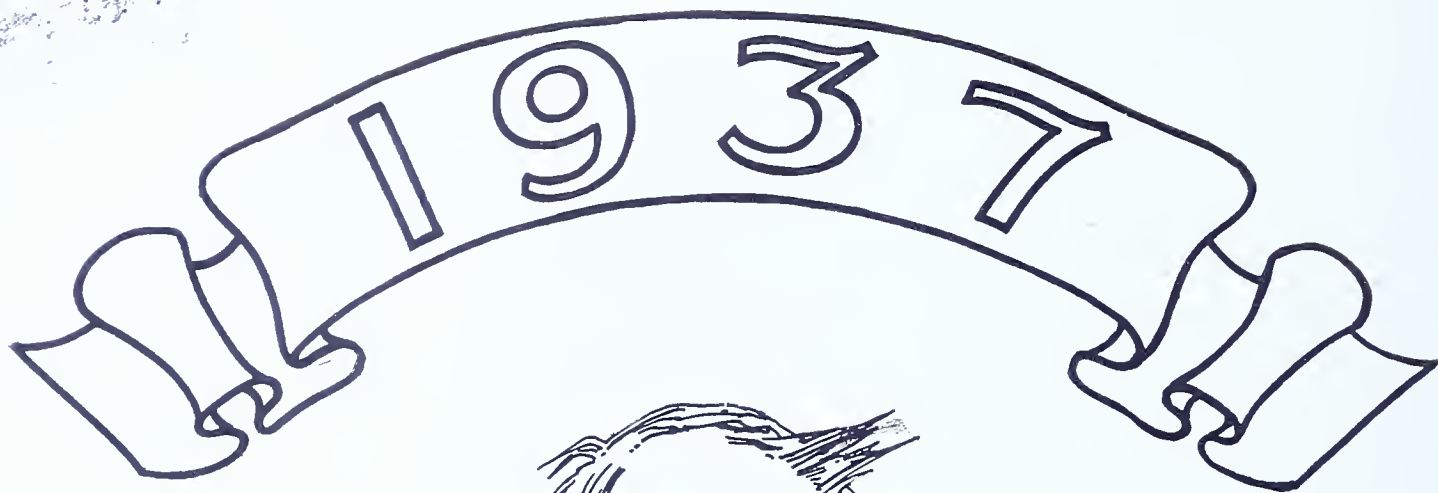
In conclusion, the fact must be admitted that because it is impossible to show how or to what extent the payment of bounties has influenced the game supply, it is also impossible to prove that the Pennsylvania bounty system has during the past twenty years been of value as a game protective agency even though such may possibly be the case.

Note: Mr. Gerstell's treatise on the bounty system in Pennsylvania will be concluded in the February issue.











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# PENNSYLVANIA GAME NEWS

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## AT THE CROSSROADS

**W**E have reached the turning point in our rabbit restocking program. Probably it is just as well because there has for years been grave doubt concerning the value of these importations from the Middle West. We can no longer count on a guaranteed annual supply of these small game creatures from other States.

For some time we have understood that there was a strong possibility of our rabbit supply being cut off by the States of Kansas and Missouri, from which we have been purchasing them for so many years.

This situation has come to pass, consequently the sportsmen of Pennsylvania and the Game Commission are faced with a serious problem.

This winter we bought our regular quota of cottontails early, 60,000 of them. They arrived in fine condition. Recently we were informed that both States intended to ban further exportation on rabbits. The Commission immediately contracted for 15,000 additional cottontails this year from Missouri. This number, together with the 60,000 previously purchased and released during mid-December, makes a grand total of 75,000 bunnies with which to supplement the remaining native stock.

Now the question arises: what are we going to do to make up for this heretofore assured crop of imported replacements?

With Missouri almost, if not altogether, out of the running, and Kansas about to follow suit we have recourse to but one alternative—that of increasing our own supply by our own methods.

Having seen the handwriting on the wall for some time, the Commission attempted to guard against this very calamity by experimenting to raise cottontails in confinement at its game farms, but without success. However, those experiments did point the way to wild rearing methods. As a result, the Commission is now planning to put into immediate operation a series of natural propagating plants in desirable sections of the Commonwealth.

It is firmly believed that funds heretofore spent in other States to purchase rabbits for restocking can be used just as effectively, if not more so, in developing such areas, and that in the long-run such a program will produce far greater results.

No time will be lost in launching this important work—in fact, plans are already on foot in order that full advantage may be taken of the coming breeding season.

It is hoped that the sportsmen will concur in this new departure and rally to the emergency, **not only by endorsement, but by concerted action.**

Organizations having club grounds ideally suited to the purpose may wish to establish propagating areas of their own. To this end we shall be only too happy to give them the benefit of our experience.

It must be remembered, however, that the Commission must first lay the general groundwork of its own system,

after which it will be in a much better position to cooperate with the clubs which are desirous of trying it.

Sportsmen, we are at the crossroads. Your aid in selecting the right road is imperative. Watch the **Game News** for further details of our contemplated program.

## LICENSE INCREASE PROPOSED

**T**HE question which provoked the most discussion at a joint meeting of the Directors of the Pennsylvania Federation of Sportsmen's Clubs and the Game Commission held in Harrisburg last month was the proposed increase of the resident hunters' license fee to \$2.60.

The sentiment of the Directors was clearly and emphatically stressed in a letter recently sent to all sportsmen's associations by Dr. C. A. Mortimer, Federation Secretary.

Dr. Mortimer says that "the Directors are convinced that there is a need for additional revenue for both fish and game work." He cited the increase of 50c in the Fishing License fee, already approved by the Federation, and suggested that all organization Secretaries submit to their members the following questions in order that they can be discussed and voted on at the next state-wide meeting of the Federation, to be held at the Capitol on Friday, February 12:

- "1. Are you in favor of a general increase of the resident hunting license fee to \$2.60?
  - "2. Or do you favor retaining the present \$2.00 fee for those who desire to hunt small game, and a license of \$3.00 for residents who wish to hunt big game?
  - "3. At the present time trapping is permitted under the \$2.00 license. Are you in favor of a special trapping license costing \$3.00 for trappers over 18 years?
- (Note: In any event it is proposed to continue the present exemption for landowners and members of their families.)
- "4. If separate big game and small game licenses are issued to residents, then would you favor a \$10.00 small game non-resident license, a \$25.00 non-resident license for large game, and a \$15.00 trapping license for non-residents?

"The Game Commission's present difficulty is obvious, as only 57c out of each hunting license fee is unobligated.\* The Commission needs additional funds if it hopes to expand its new farm game program to benefit the small game hunters. It needs additional funds for added law enforcement work, for more game restocking, and for the development of special rabbit, quail and ringneck pheasant breeding areas from which to trap surplus game for distribution. We also understand that this will probably be the last year large numbers of rabbits can be obtained from the West because western states plan to prohibit rabbit exportation.

"I hope the Federation members will at once let me have their reactions to the foregoing suggestions, and suggest that organizations not yet affiliated advise the Game Commission direct concerning their views."

\*Readers who are interested may obtain full information from the Game Commission.



By  
Richard  
Gerstell



Two-thirds of the bounty costs are spent for the destruction of the weasel. During December, 1936, 13,545 weasels were probated for bounty.

# The PENNSYLVANIA

**I**N addition to the effects discussed in last month's issue, the bounty system has produced several general effects, probably the most important of which has been that of an educational nature. The same may be divided into a number of distinct phases, each of different value.

The first educational effect of the bounty was that direct and pleasant contact necessarily formed between all the scattered bounty claimants and the Game Commission through the payment of the claims presented. By this means, thousands of people in the rural districts soon came to know of the Commission and its work. During the early years of the present system, the contact just mentioned was probably one of the Commission's most valuable means of conservation education, although it has today been supplanted by numerous other instruments.

Secondly, the system has educated the public to the necessity for predator control. Unfortunately, this may prove an ill-directed and misspent activity in which vast amounts of time, money and energy have been wastefully expended, while if instructed in a deeper knowledge of animal ecology, those same forces might have been far more gainfully employed by all concerned.

Thirdly, through the payment of monies for the destruction of goshawks, the system has spread the knowledge and ability of species identification of the various hawks. This may clearly be seen by the fact that during the first year under the goshawk bounty over 75 percent of the birds presented as goshawks were other species, including almost everything from sparrow hawks and screech owls to golden eagles and turkey vultures. Within six years, however, the picture had been completely reversed and the great majority of hawks presented in claim were goshawks, while the remainder were chiefly immature specimens of the larger hawks of appearance somewhat similar to the goshawk.

Finally, the system has afforded research opportunities of unusual rarity. Through the presentation of hundreds of hawks in claim for bounty, it has been possible to obtain in a relatively short time material for food habit studies which are elsewhere not available. Both the Game Commission and the United States Bureau of Biological Survey have availed themselves of this opportunity to gain appreciable amounts of valuable information.

The constant opportunity presented by the bounty for other valuable scientific research, including fur studies, animal distribution, etc., has, however, not been utilized.

In addition to its educational value, the system has to some small degree served as a means whereby the landowners may be recompensed for the interest they may have shown in the protection and increase of game through the destruction of predatory species commonly believed to be most detrimental to it.

Along the same lines, the system offers rewards to those persons who deliberately set out to control certain predators for the protection of game. This has served as an inducement for a very limited number of individuals to make a specialty of trapping vermin chiefly for the remuneration afforded by the bounty. Certain of them operate long trap lines, visited by automobile and otherwise, and their single claims, made at more or less regular intervals, frequently cover the killing of more than fifty weasels or as many as a dozen grey foxes.

On the other hand, a very large percentage of the monies paid for bounty go to claimants who have killed the animals presented for the protection of personal property, or for sport, and not with the idea of protecting game. For example, if any farmer suffers a loss of poultry through a weasel raid, he will make every effort to kill the marauder solely to prevent further losses, but having killed it, he will present the animal in claim for bounty. In many instances, predators sighted in the vicinity of farm buildings are destroyed to prevent property losses even before they occur, but there again the specimens will be presented for payment. Likewise, many persons who are in the field primarily in search of

HERE IN IS PORTRAYED  
THE EFFECTS OF





Many foxes would be taken as a protection to property regardless of their status under the bounty laws.

*Concluded  
in this  
Issue*

# BOUNTY SYSTEM

game seize upon unexpected opportunities to kill foxes and even wildcats. These animals are instinctively shot for the thrill of killing and not with the thought of controlling the species for the protection of game, but they are, nevertheless, presented in claim for bounty. Thus, a vast amount of money is constantly being expended for the payment of bounties upon animals which would be killed regardless of whether or not a reward were offered for their destruction. Considering the purpose of the bounty, "to control predators for the protection of game," all such payments are needless expenditures.

That the types of claims just mentioned are most numerous is evidenced by the average amount of the claims presented, which has been shown to be \$3.16. This indicates that a large proportion of the claims presented are for one weasel, and since it is known that the great majority of the names contained on the list of persons receiving bounty payments appear only once, or at intervals of many months, it may be concluded that most persons who collect bounties do not make a regular practice of killing predators to protect game, but present claims only when they happen to have made some chance kill during the pursuit of other duties.

The number of individuals presenting claims in the manner just mentioned has, of course, tended to increase as the knowledge of the system of bounty payments has spread and also is greater during periods of economic depression than at other times. In all probability, the ever enlarging number of claims of the type just mentioned largely account for the increasing tendency exhibited by the amount of the average annual bounty payments as heretofore discussed. Also, the fact that many persons who formerly killed animals for the protection of personal property, but never

presented them in claim for bounty are now tending to present such animals shows that the number of animals presented in claim for bounty does not necessarily represent the total of the predators killed during any given period.

Lastly, the system has invited attempts to obtain money fraudulently through the filing of illegal claims. While such action resulted in the repeal of several former bounty laws, the present regulations and careful investigation of all claims keep the practice at a minimum and probably very little money is fraudulently collected. A study of the records will show that the officer held responsible for the investigation of bounty claims has during the past five years been forced to bring in the neighborhood of 77 prosecutions resulting in the collection of approximately \$7,600.00 in penalties and a few jail sentences.

## CONTINUANCE

Arguments for and against the continued operation of a bounty system in Pennsylvania are most numerous and very bitterly debated. Some persons feel that the general system now in effect should be maintained and even enlarged by adding more species to the bounty lists. Others claim that the present policy should be completely abandoned and that the funds now allotted to operating the system should be put to other uses, such as the purchase of game for restocking purposes. In addition, certain individuals believe the Commission should attempt to control the various predatory species by means of a force of paid trappers.

Since the opinions concerning the bounty system are so varied, possibly the best method of approaching the problem at hand is to again proceed with a species by species analysis.

### 1. On Goshawks

Since, as already shown, the payment of bounties for the destruction of goshawks in Pennsylvania will never result in the control of the species, chiefly because a negligible percentage of the population is resident within the Commonwealth, and because the problem is a seasonal one dependent upon periodic migrations, it appears most advisable to discontinue the payment of bounties on goshawks at the earliest possible date.

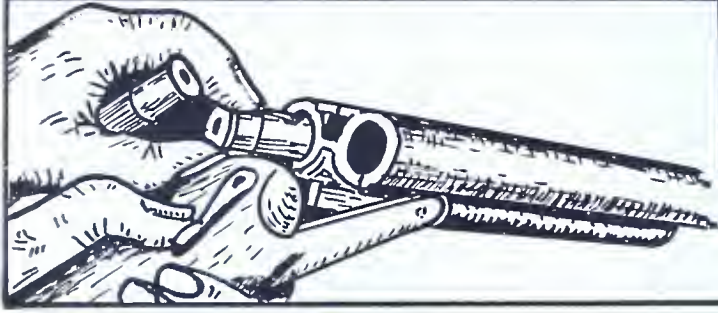
Even with the bounty removed from the species, it is quite pos-

(Continued on page 24)

**A DETAILED STUDY OF  
THE BOUNTY SYSTEM**



# PUMPKIN



## BALL vs. RIFLE

By WALTER D. PERRY

*Editor's Note: Walter D. Perry, nationally known firearms and ballistics expert, and one well qualified through many years of experience with every make of weapon, herein discusses the relative merits or demerits of the various guns used to hunt big game.*

*Mr. Perry feels that since it is the mandate of the people that a number of our wild creatures must be killed, that they should be killed as cleanly and as quickly as is humanly possible, having also in mind the safety of ourselves and our fellow hunters.*

*This article is reprinted from the sports column of the Pittsburgh Press, edited by John G. Mock.*

### There are All Kinds of Guns

It is my lot to work at an occupation which brings me in daily contact with these hunters and their guns and am, therefore, in a position to know what the boys are going to use and what they have been using for the past several years. Some of these weapons are ultra-modern, adequate and things of precision and beauty—truly a reflection of the splendid sportsmanship of their owners.

Others are serviceable and, in a measure, adequate, if used by experienced marksmen. But the great majority of these guns are inadequate for the present day big game hunting for three main reasons: (a) they lack sufficient power; (b) they are not accurate, for two reasons, one they are improperly sighted, the other the bore is worn out; (c) they are mechanically out of order and, therefore, dangerous.

The sad part is that there is no law against the use of any kind of a gas pipe that will discharge a solid ball, either lead or the soft point variety, but more about this later.

The writer has learned to call a spade by its real name. Furthermore, he has seen so many of these glaringly inadequate weapons in use that, of late, he is prone to perpetually carry a rather large chip on his shoulder: My next remark is plainly written on this chip. "The most inadequate and dangerous weapon in the woods today is the shotgun loaded with the well known pumpkin ball."

The gun itself is one of the best loved implements known to sportsmen and when used with shot shells on small game is about all that any sportsman could wish for. But it was never designed or intended to shoot a solid ball load. In the first place, this combination is not accurate. There is no rear sight and the bore is not rifled. It is impossible to place a standard 100-yard target at 50 yards and hit it twice in 10 shots.

It will not develop a velocity greater than 1200 FS—and misses at this low speed will, upon striking an object such as a tree, stump, or stone, glance and ricochet at a tangent from the line of fire, thus endangering the lives of other hunters. On account of its lack of power and accuracy, many deer have been wounded which have either survived a lingering death or were slain and claimed by another hunter. I have always thought that the pumpkin ball is responsible for a great portion of the dead deer found after the season is over, a needless drain on our game supply. It is true that deer have been killed with this outfit—for that matter, my grandfather once killed a big buck with a stone—but this feat never enthused me to go deer hunting armed with a pocketful of rocks.

Some may ask "What about our grandfathers, their old muzzle loaders were no more powerful, yet they got deer?"

When grandpa hunted there was not an army in the woods. He

stalked his deer—he could shoot—the old muzzle loader was accurate—he only had one shot, so he did not shoot until he knew he was holding on a vital spot—he had time to wait—if it ran after being struck, the old timer was in no hurry; he waited for a half hour and then followed the trail. In most instances he found his deer not over two hundred yards away. If another hunter found his deer he dared not claim it.

### Power Enough to Kill Instantly

Some people have been foolish enough to take an ordinary .22 rifle, but I hope this does not often occur. It is not uncommon to see the following cartridges used in big game hunting: .25 RF, .32 RF, .25-20, .32-20, and a number of obsolete rifles as well as foreign made military weapons, which, no doubt, possess enough power but are so poorly sighted and so nearly worn out as to render them very inaccurate. The users of these sorry weapons are more hopeful of securing a 10-point buck than he who totes a .30-06 equipped with a \$12 sight.

You will probably ask "Just what is your idea of a big game gun and why?"

The big game gun should have plenty of power; should be accurate and should be mechanically safe. The deer is a hardy animal and possesses a lot of vitality; it follows that it requires a lot of energy to kill it quickly and cleanly. The law of the woods now is that he who puts the deer down to stay is the owner of the trophy, no matter if it has been mortally wounded by another hunter.

I dare say that a number of you hunters who may chance to read this article have shot deer and knew they were hit hard but did not knock them down—you have seen them stagger on for a few yards to be shot, knocked down and claimed by another hunter, who knew full well he had shot a dying animal. Since this is not a discussion on sportsmanship, I will withhold comment on this practice.

In order to avoid disappointment such as this and in order to cause the least amount of suffering on the part of the victim, it again follows that the rifle should have power enough to knock down and instantly kill a deer if struck in a vital place. This, naturally, leads to the second qualification, accuracy. In order to place the bullet near a vital spot the piece must be accurate.

Three things are essential to accuracy; clean bore, proper sights correctly aligned and proper ammunition. The third general qualification of the rifle, safety, may be explained by saying that the arm should be strong enough to withstand the breech pressure developed by the exploded cartridge, the mechanism should be in good working order and the trigger pull should not be under four pounds; five is safer.

There are three popular types of repeating rifles. These are known as the lever action, the pump, slide or trombone action and the military or bolt action. Choice of these styles is best determined by the user himself.

When it comes to the ammunition, there is a lot to say, but I have boiled it down to a formula which, in my research and experience, seems to fairly well define an adequate charge.

A cartridge, whose total velocity in foot seconds and energy in foot pounds which does not equal 3500 is inadequate for big game hunting in our state.



### Glancing Bullets Most Dangerous

I will illustrate by saying that that very excellent and well known .30-30 has a muzzle velocity of 2250 foot seconds; in other words, the pellet is traveling at this rate of speed at the muzzle. It has an energy at the muzzle of 1910 foot pounds. This is equal to the blow struck by a weight of 1910 pounds dropped the distance of one foot. The velocity, plus the energy, in this instance, is 4160, which is 660 in excess of my suggested minimum.

This 3500 minimum includes the .25-.35 and the .25 Remington, which are a little light for the average hunter but when used by a good marksman is, unquestionably, an adequate charge. This excludes all the pea shooters such as the whole rim fire family—the .25-20, .32-20 and all the old black powder cartridges. It also excludes many of the once popular low pressure cartridges.

Answering a probable question, I will name some of the popular charges that are adequate to use on our big game: .250-3000 Savage, .257 Roberts, .270 WCF, 7 m/m, .30-30 WCF, .300 Savage, .30 Remington, .303 Savage, .30-40 Krag, .30-06 Springfield, .32 Remington, .32 WS, .33 WCF, .348 WCF, and .35 Remington.

There are some foreign cartridges and some antedated domestic charges omitted in this list because they are no longer popular.

Yes, these are high-powered cartridges. No, they are not half as dangerous as any of the charges that are slower than 2000 feet. Of course, if a person is so unfortunate as to be in direct line of fire he must be considered a casualty. Happily, only a few people are ever shot in this way. The greatest danger is from glancing bullets, that is, bullets that strike most any hard object and ricochet for hundreds of yards in a different direction from the line of fire that causes most of the accidents.

Bullets which have a velocity of 2000 feet or better will, upon striking a hard object, disintegrate into tiny pieces and dust—the

bullet is completely destroyed and cannot cause any damage by glancing. The dangerous gun in this respect is the low velocity cartridge of which, as we have mentioned before, the pumpkin ball is the worst offender.

I have wondered why so many of the boys, who ought to know better, will use these contraptions, and have come to the conclusion that there are three main reasons. First, the only regulation in our game code is that a single ball may be used on big game. Our hunters have a legal right to use any old blunderbuss that will shoot such a ball. Second, only a small percentage of our hunters actually know of their shortcomings, or their danger. Third, the economic side. A modern rifle costs in the neighborhood of \$50 and a lot of our boys want to go hunting who cannot spare that much money which, no doubt, they all desire. So they dig up any old thing which will shoot a

single ball and hope that the gods will lead them close enough to a big buck to hit it.

The only authority I have for this statement is our local game protector.

Our Game Commission is thoroughly familiar with this question. I understand it was discussed at a great length at one of their recent meetings. They can do nothing about it as it requires an act of the legislature to make such regulations. I am confident that our Game Commission would be highly pleased to see these unreliable arms ruled out.

All forward looking and right thinking sportsmen believe that there should be a regulation in our game code which would render conditions less dangerous for the hunters and more humane to the game. I am confident that these

sportsmen would strongly support legislation designed toward this end. I further believe that our lawmakers would pass such a bill if it were drawn in a sensible, straight-forward way and free from political riders, which too many times have killed good legislation.



Hundreds of deer are found dead after each hunting season by Game Protectors, some having been killed illegally, others having escaped to die of mortal wounds.

### INDIANS CONSERVED GAME

Game conservation is not original with civilized man. The American Indians established and observed game laws even in the days when this country was lush with wildlife.

Disregard for Indian conservation principles is believed to have been the cause of the war between the Iroquois and the Eries, Dr. W. C. MacLeod of New York notes in the Scientific Monthly. La Hontan, in an account written in 1725, says the Eries trespassed on Iroquois territory and "acted contrary to the customs of all Indians, for they had left none of the beavers alive; they killed both males and females." For such wanton extermination of the beavers the Iroquois exterminated the Erie tribe, Dr. MacLeod says.

The Algonkians of the north took a census every year of the beavers and killed only the very young or very old animals, leaving the breeders. The Choctaw Indians of the southeastern United States had laws governing the amount of game each family could kill and each month reports of this had to be presented to the chief.

Over in northeastern Siberia the Yukaghir tribe always left part of a wild reindeer herd for breeding and when they placed a net

across a stream to catch fish they always allowed some to pass first so that they might spawn.

### FLEISCHMANN STARTS FUND

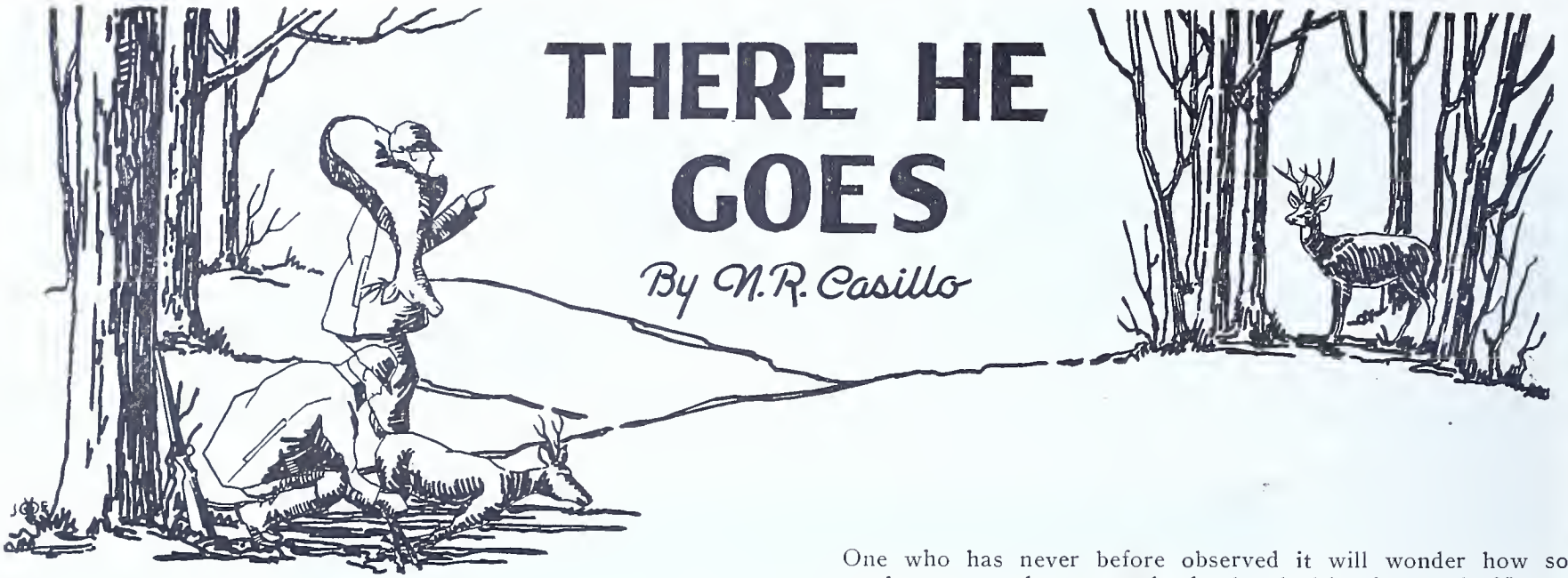
To aid constituted law enforcement authorities in their efforts to stamp out the crime of game "bootlegging," wildlife racketeering, and other law violations, the American Wildlife Institute has started a "Law Enforcement Fund," to a recent communication of that organization.

Founder of the fund is Major Max C. Fleischmann, chairman of the Finance Committee of Standard Brands, Inc., member of the Board of Trustees of the Institute, and prominent sportsman and conservationist of California and Nevada. Declaring that every true sportsman should do his share in aiding law enforcement authorities to stop market hunting, the illegal sale of game and other infractions of the "sportsman's law," Major Fleischmann made a sizeable "ear-marked" contribution, which opened the fund, at a recent dinner given by the Institute in New York.



# THERE HE GOES

*By M.R. Casillo*



**T**HE SCENE was reminiscent of the opening line of *The Shooting of Dan McGrew*; the gaily decorated back room of the town's leading hotel being jammed with men picturesquely garbed in all manner of outdoor clothing. The decorations of the smoke-filled room were appropriate for the occasion, consisting of autumn leaves and evergreen boughs fantastically arranged about the five or six mounted deer heads that gazed down on the giddy assemblage in wide-eyed innocence. Above the babble of voices and loud laughter could be heard the feeble strains of music provided by a couple of seedy young fellows manning a mandolin and a banjo.

Some of the men at the table might well have served for some of the characters in that poem of strong men and painted ladies. One hard visaged individual was particularly arresting as he gazed at the floor in stony silence, with an expression on his face akin to the baleful glare of a cornered wildcat.

Alone at a table next to he of the hard visage sat a swarthy middle aged man, strangely dressed in the outfit of an aviator, complete even to headgear and goggles, the latter sitting grotesquely on the top of his head. Even as I looked he swayed dizzily in his chair, attempted to right himself, and then disconsolately flopped to the floor. No one paid the slightest attention to the prostrate form until a stocky and determined looking "bouncer" shuffled into the room, dragged the erstwhile "flyer" from the floor, then to the door through which he was forcibly ejected. After some inquiry we learned that the victim was the local Indian herb doctor, and the togs he sported facilitated the riding of his steed, an ancient motorcycle.

After another half-hour or so of similar entertainment my companion arose and said: "I'd say that there's no need of going to Alaska or Hollywood to see the stuff that movies are made of."

"Yeah, and now I wouldn't be surprised to find a dog team waiting for us outside ready to mush us into the bush," I agreed. "Might as well call it a day," I added, making for the door.

The above is not a scene in a frontier mining town nor the figments of a vivid imagination, but a typical first-nighter episode on the eve of deer hunting season in the town of Marienville, Forest County, this state. Every one has a jolly time, even the spectators; all reveling in the music, good fellowship and tall stories of rod and gun. And you can bet your bottom dollar that every single one of those revelers will be on the job when the bars (iron or otherwise), are let down on the following morning.

Three miles northwest of Marienville the dirt road (now wonderfully improved by C.C.C. operations), crosses Big Salmon Creek. Both above and below the bridge is topnotch deer country, with Buzzard Swamp on the east and the wide creek valley on the other side. As we passed over the slippery road it was obvious that the deer hunters were either taking or had already taken possession of every suitable parking and camping site along the road. Motors of every description, including large trucks rigged out like prairie schooners, and trailers ranging from the neat folding type to great juggernauts of sheet metal and roofing paper, streamed over the roadway.

One who has never before observed it will wonder how so many hunters can be so completely absorbed by the woods. Nevertheless, they are, and the wonder to me is the actual few that one encounters even on the opening day. At a time like this one really begins to get an inkling of the expansiveness of our wild lands.

Because of the possibility of encountering fewer hunters, Guy, my companion, and I chose the west or downstream side of the bridge, although on the opening day last year, ninety-six antlerless deer and a proportionate number of legal bucks were seen by a single hunter stationed in the swamp during the course of the morning. But the flat, swamp country has its attendant dangers, hence our selection of the bluffs and cliffs of the west side.

On that bleak, damp morning of the first day Guy and I elected to remain on watch at strategic points about a mile below the bridge, selecting stands about two hundred yards apart located on either side of a good pass, and waited. For an hour or so after daylight we were still waiting and rapidly freezing. Down valley from us we heard a few shots, but everything was quiet on the western front. From the distant swamp could be heard the din of the terrific barrage that was being laid by the legion of hunters.

Around eleven o'clock Guy joined me and suggested that we do some still-hunting. I needed no urging, so without any plan we skirted the slope and plunged into a thicket of sapling beech where things began to pop fast and furiously. Immediately we jumped four deer, but held fire because of the difficulty of distinguishing sexes in the thick cover. My companion then raced down the slope toward the stream for it seemed that the animals were headed that way; whereupon I lost no time dashing after him. Our quarry headed for the place we had surmised, but arrived there far ahead of us. With flags flying high they dashed into the hemlocks, crossed the stream and climbed the opposite slope. At a distance of approximately two hundred yards they stopped and turned to look (a characteristic weakness of the whitetail). My glasses showed the last in line to be a legal buck, so I let him have it. He fell to his side kicking, and the prolonged, blood-chilling squall that he uttered indicated an abdominal wound. Some one within earshot yelled: "There's one that's done for!"

We stumbled and splashed across the stream and puffed up the sharp rise, but when we reached a point from where we could see, the deer was gone. Farther up the ridge we heard a sudden fusillade of shots followed by jubilant yells; sounds that all too vividly presaged the fate of the hapless buck.

During lunch we made plans for the afternoon's activities. The rain had stopped and it was getting steadily colder, usually good indications that the deer would be on the move; it having been my experience that deer will begin moving soon after the cessation of either a rain or snow storm, no matter what time of the day it happens to be. So after considering the situation we decided to still-hunt, for in addition to the other favorable circumstances already mentioned, the woods were well soaked and would tend to reduce noises to a minimum, an absolute essential in still-hunting the whitetail.

(Continued on page 17)



# DO YOU BELIEVE IN



## Signs?

*By Randolph Thompson*

"Gunners Keep Out", "No Hunting Allowed", "Gunning Prohibited" in bold black headings on countless numbers of trespass warnings. Yes, there were signs galore of other vintage—"No Trespassing", "Private Property, Keep Out", and divers other sinister admonitions.

The writer was astounded, during the small game hunting season just closed, at the predominance of placards on posted private holdings which emphasized the word "Gunner" in one form or another on its top, big-type, line. In no instance, in motoring over hundreds of miles of highways and byways in the four counties lying nearest to Philadelphia, was the caution addressed to Sportsmen, in any such heading as "Sportsman Keep Out." As a matter of fact, I have never in my extensive wanderings through all parts of Pennsylvania stood face to face with a trespass sign pointedly directed at sportsmen. Does this signify anything thought-provoking to you?

It should not be necessary to qualify the word "sportsman" with the adjective "good" when we speak of any clean, fair-minded participant in any field of sports. The single word should imply, just as Webster's Dictionary defines it, "one who in sports is fair and generous; a good loser and a graceful winner." It would seem to follow, therefore, that when the word "sportsman" confronts us in printed or in oral form, it should automatically register without further qualification all those attributes embraced in its definition.

"Gunner," by the same authority, is "one who guns, or hunts with the gun." No inherent qualities of fairness, generosity, graceful losing or winning is implied. Where sportsmanship calls to mind rules and regulations, laws and codes, gunning has its fulfillment in shooting and more shooting, at targets or no targets, at anything, everything. The sportsman joyfully anticipates and awaits the opening of the legal season, keeps within the bag limits in his shooting, allows a flock of quail to fly away unscathed where conservation calls for self denial. He realizes when necessary that killing the limit is just one shade better than taking beyond the legal quota, in so far as the future supply is concerned. He knows that one bird or rabbit, allowed to remain in the cover for next year's reproduction, is worth more to future sport than all the season's bag.

What of the gunner? The pre-season and post-season hunters are of that ilk. To him the Game Code is meant for the timid soul. Meat is meat at any time or all times. A covey of quail on the ground is fair spoils, and a shot en-masse saves ammunition. A ringneck hen is as savory as a cock bird. Let the future generation look out for itself, "I'll get mine while the getting is good," is the motto. A stone fence is no haven for a cottontail, it cannot be allowed to escape, not even at the expense of the structure. Keep beyond 150 yards from the house,—a foolish law, why there are rabbits in the garden.

Is it to be wondered at that trespass warnings are directed at "gunners"? Can a landowner distinguish between a sportsman and a gunner? Very frequently the mere asking for permission to hunt

is accepted as an earmark of good sportsmanship. Tangible evidence of membership in an organized Sportsman's Club in the form of a button or card is convincing. Membership in any worthwhile conservation group carries with it a pledge to observe certain by-laws or some code of ethics, either of which embrace

forward-looking conservation measures. It follows that no active or bonafide member of a sportsmen's organization would be classed with the "gunners." Such membership brings home as no other thing does the individual license-holder's owner-partnership and attending responsibilities.

Vandals and game hogs are not numerous in any one locality or county. Outlawry is the exception and not the rule. However, just as a few drops of skunk scent can taint a whole countryside, so will nefarious practices on the part of one hunter often result in withdrawal of privileges from many who are above reproach. One vandal in a day may do more harm than a whole organization can remedy in a year's time. Once signs are tacked up, it is a difficult job to bring about their removal. Elimination or prevention of lawlessness would seem to be the logical means of meeting the problem. But how to contact the offender and bring home to him the error of his ways is the stumbling block. Since he is not to be reached through organizations what extra-educational means can be adopted which may prove efficacious? While policing may be a deterrent, it is not a remedy. What publicity scheme or spread of propaganda may be expected to bring results where intended?

We are a nation of outdoor enthusiasts. Our school system encourages outdoor activities and competitive sports. Fair play at all times is an integral part of the program. Classes in nature study, zoology, and biology awaken an interest in the things of the wild. Eager and receptive minds would learn more of what Nature has to offer the initiated, and conservationists are in the making. School children carry home to parents and the entire family newly found truths and ideals. Many an enlightened child has brought home to an erring parent the error of his ways. Parents have told the writer that as a result of things discussed in a school program they have been shamed by their children and have ceased to be violators. Surely such work is worth while, and is one sane method of procedure.

Boy and Girl Scout groups, National Youth Administration gatherings, summer youth encampments, Four-H Clubs, and Junior Sports Organizations are fertile fields of endeavor. A sportsmen's organization can in no other way attract the attention of sober minded citizenry more quickly than in working with the youth of a community. Much has already been accomplished in widely separated parts of this State in encouraging boys and girls to make plantings of thousands of trees on denuded hillsides and abandoned fields, providing food and cover for wildlife and beautifying the landscape. Interest in bird life and study has resulted, and competitive contests in bird house building create much interest. Care with fire in the woods, first aid methods, woodcraft, safety in handling firearms, camp lore, conservation practices, and many other pertinent things have been taught in and been put in practice by youth groups. Much valuable work in shelter construction and winter feeding of wildlife has been performed by the younger generation. In looking to future sport many senior organizations may find incentive to more and better work in fol-

(Continued on page 17)



# Wildlife

By W. L. McATEE

the waters, as pigeons filled the air, but in many areas they no longer appear and in all they have but a fraction of their former abundance. These are merely symbolic cases; all wildlife has suffered in the same way, if not to the same extent.

At last, and in some cases, as we know, too late, in others we hope, in time, the American people have realized that provision must be made for wildlife if it is to continue to exist. Such provision must include not merely better protection, but adequate allotment of lands on which wildlife may find refuge and safety for rearing its young, and finally intelligent and sympathetic management, so that all facilities that can be devoted to wildlife shall have the greatest possible effect. A brighter day for wildlife seems to have dawned, and wildlife management already has a well-defined part in such new national cares as land-planning, rural resettlement, and erosion control, as well as in the revitalized general conservation movement.


## *Origin and Present Status of Wildlife Technology*

Wildlife technology had its origin in the search for better methods of game restoration on private estates, has been contributed to by some of the more permanently organized of the State conservation departments, and now is a major function of six Federal agencies—the National Park Service, the Forest Service, Soil Conservation Service, Resettlement Administration, the Tennessee Valley Authority, and the Bureau of Biological Survey.

Of all these, the Biological Survey is most extensively occupied with wildlife management, and in retrospect it seems that throughout its history of more than half a century the Survey has been developing techniques that now prove to be essential in wildlife technology. This development was, in its earlier stages, entirely without reference to wildlife management, a practice then scarcely imagined. In later years the tie between scientific method and practical application has been much closer and the varied techniques fit into the technology like parts of a well-built machine.

## *Identity, Range, and Migration Techniques*

Among these techniques, those of classifying animals, working out their ranges, and tracing their movements were prominent in early activities of the Biological Survey and are still continued. The Survey has sent exploring expeditions to almost every part of the Republic and of other parts of North America, including Canada, Mexico, Panama, and our Territorial possessions. It has accumulated representative and extensive collections essential to sound classification, and it has trained competent taxonomists. Although not confined to the Survey, work along these lines has been carried on more intensively there than elsewhere, and the Bureau is recognized as the




The establishment of a system of migratory bird refuges gives adequate protection to wild fowl on the breeding and wintering grounds and throughout the major flyways.

## Introduction

THE livest, the most widespread, and perhaps the most socially significant activity in the field of American biology today is the technology known as wildlife management. This technology derives its importance not from the logic of present conditions alone but also from belated recognition by the American people of the profligacy with which they have squandered their wildlife heritage. Originally unsurpassed by that of any other continent, American wildlife has been slaughtered and deprived of essential range until certain species have been exterminated and many others dangerously reduced in numbers.

The famed wild, or passenger, pigeon, once present in what were considered inexhaustible myriads, is now only a memory. The buffalo, once existing in herds so filling the plains that they were never out of sight of pioneers on the march, day after day, for weeks on end, exists now only on special reservations. Wildfowl once covered



The refuges should be planted to aquatic species which attract waterfowl. Here a Game Refuge Keeper is sowing wild rice.



# Technology

principal focus of such information relative to the fauna of North America.

The classification of animals is basic to all further study. Its most practical result is a dependable system of names, which enables workers to learn what has been recorded about any particular species and to compare notes effectively with other investigators. The wildlife technician must accurately know what forms he is dealing with; identification is the key to all that is known of relationships, distribution, and habits, and it enables him to shape his practice in the light of knowledge that all investigators, everywhere, have accumulated—truly an inestimable advantage.

Throughout its history the Biological Survey has been aiding workers by making these critical identifications; it has further collected information on the geographic distribution of animals and intensively studied bird migration. In the course of the migration work, millions of records from all sources have been assembled, providing a more satisfactory basis for generalizations than has ever been available elsewhere. The technique of bird-banding has been adopted, improved, and extended. Its peculiar importance arises from the tracing of the movements of individual birds, thus making possible, in the long run, more accurate definition than has ever before been possible, of migration routes, general bird flyways, and winter and summer ranges of species. The scientific data bearing on the ranges and movements of birds are indispensable to proper conduct of wildlife management problems involving more than a single State, hence play a leading part in those highly important activities that only the Federal Government can conduct. Among these are the promulgation of regulations protecting birds migrating between the United States and Canada, an annual task since 1918, and the establishment of a system of migratory bird refuges giving adequate protection to wild fowl on the breeding and wintering grounds and throughout the major flyways of the United States.

## *Food and Cover Techniques*

Coexistent with study of the identity, distribution, and migration of animals from the inception of the Biological Survey was research into their food habits. From this technique have developed, partly because of actual relationship, and partly through accidents of administrative history, a number of other techniques for the improvement of environment and for the encouragement of desirable and the control of undesirable species, which are today the very warp and woof of the wildlife manager's art.

Originally developed to throw light on economic values in relation to agriculture, horticulture, and forestry, this work soon responded to the needs of wildlife management, although that term was then unknown. A comprehensive report on the food

habits of the bobwhite was published in the Yearbook of the U. S. Department of Agriculture for 1903. This was revised in bulletin form and accompanied by accounts of six other species of quail in 1905, and in the same year a similar bulletin treating 12 species of grouse and the wild turkey was issued. Systematic research on the food habits of wild fowl was begun in the laboratory in 1905 and in the field in 1908. The first publication on wild-duck food plants appeared in 1911, and it has been succeeded by a number of papers on that subject.

The technique of food-habits research involves laboratory analysis of the contents of the alimentary canals of collected specimens, of feces and regurgitated pellets, of food remains at dens, nests, and roosts, as well as all practicable field investigations of feeding habits and of the utilization of food supplies. Such studies yield data, not only on specific food habits but also on the local, seasonal, and general value of food items, that are of fundamental utility in wildlife management.

(Continued on page 23)



Wildlife refuges cannot serve their highest usefulness if merely established and forgotten. They must be "farmed" in order to provide enough food for the number of creatures which normally live therein.

Federal migratory bird refuges now total over 100, comprising 1,600,000 acres, within the limits of the 48 states. Coots fed and rested in great numbers on the Pymatuning waterfowl refuge in Pennsylvania last fall.





# CURRENT TOPICS



*Photo courtesy Nature Magazine*

Charles Jones of Vancouver, British Columbia, is the world's greatest bird lover. Note the little pine siskin plucking a bit of food from his lips.

## BIDDLE-CREVELING REELECTED

At its regular meeting on January 6 the Game Commission elected Major Nicholas Biddle of Philadelphia, President, and J. Q. Creveling of Wilkes-Barre, Vice-President.

Both officers were extended a note of thanks for their untiring efforts in behalf of the Commission and the sportsmen.

## PRELIMINARY GAME KILL

Early predictions of Pennsylvania's 1936 deer kill have been confirmed by preliminary reports submitted by field officers. The kill, which at the outset was expected to reach the 22,000 mark, dropped noticeably on account of heavy snows and extreme cold which caused many hunters to break camp after the first few days. There was more hunting from roads than ever before, a practice which the Commission deplored.

Despite the adverse weather conditions, the kill of legal bucks numbered 18,000, over five thousand under the 1935 mark, which reached the high peak of 23,802.

Fewer persons hunted deer this season than last, which also tended to reduce the

bag. Industrial sections, particularly the mining districts, contributed very little to Pennsylvania's army of deer hunters because of steady employment.

## Large Bear Kill

The bear kill reached a higher peak than expected considering the fact that only a limited season of four days was prescribed. Good tracking snow was one of the big factors in running it up to the amazing large total of 356. There appear to be ample bears left for seed stock, according to hunters who saw many of the remaining animals during the deer season.

The regulation which prohibited hunting bears during the deer season met with hearty approval of most big game hunters.

## Small Game Season Below Normal

The small game season regrettably was below normal, and there was a decided scarcity of quail, rabbits and squirrels, as predicted early in the fall. The ranks of all small game were seriously depleted during the severe snows and big floods of 1936.

Preliminary figures on the past season are as follows: Rabbits, 1,338,892; squirrels, 373,785; and quail, 42,095. Grouse held their own in some spots, but fell low in others. The total kill numbered 96,909. Wild turkeys and ringneck pheasants provided the best hunting, the ringneck literally saving the day—267,890 ringnecks and 3,208 wild turkeys were taken. Spring releases of mature pheasants helped considerably to increase these birds which so greatly relieved the burden of shooting on the more valuable species.

The 9:00 o'clock shooting feature of the small game season was unanimously favored and will likely be continued next season, also applied to the opening day of the big game season.

## Accidents Lower

There was a decided decrease in the number of hunting accidents during 1936, only 19 fatal and 149 non-fatal occurring as against fifty-five fatal and two hundred and fifty-two non-fatal the year before. The 1936 figures do not include fatal and non-fatal accidents which were not attributed actually to hunting, whereas the 1935 figures do. The Commission purposely broke down its record of hunting accidents this year to differentiate between those accidents actually occurring while hunting and those which were inflicted while participating in some other activity, while going to and from camp, etc.

In addition to all accidents so far recorded, there were 17 which were classified as non-hunting catastrophies, even though they were incidental in a way to this sport. Of these twelve died from heart attacks while hunting, one fell out of a tree, one was shot by a landowner for trespassing, one was

killed in target practice, one was hit by a train enroute to camp, and the other was killed in an automobile accident returning from a raccoon hunt.

## TO CONTROL PREDATORS

A statewide predator control campaign was decreed by the Game Commission at the culmination of a special conference of Division Game Supervisors held in Harrisburg recently.

An astounding number of predators, particularly foxes, stray dogs and homeless cats, and their subsequent inroads upon an already depleted game supply, made it necessary for the Commission to take such drastic steps.

The officers, who have been making extended surveys since the close of the small game season, expressed genuine alarm over conditions and urged that a general S.O.S. be sent all sportsmen and nature lovers asking them to rally behind a gigantic program of predatory animal control, winter feeding, and game food planting.

Plans to carry on these projects are already under way but the Commission cannot hope to carry them out effectively without every sportsman's assistance.

With these acute situations arising it is almost out of the question for County Game Protectors to cope with them unassisted. A highly organized vermin campaign is urged therefore and all Game Supervisors have been asked to launch this important work immediately.



Another alarming condition cited by the field officers centered around the poor food conditions in the big woods. Mature forests in many cases are so thick, particularly at their crowns, that they have completely shut out the sunlight so necessary to the growth of the smaller, succulent plants and shrubs which are so much needed by game.

The Commission is now working on a series of cutting-out programs on its game lands to remedy this situation, and it is believed that similar work on other forest lands, including extensive lumbering, will ultimately solve much of this problem.

Supervisors reported that there was better law observance during the past season than for many years, and that the sportsmen generally favored the 9:00 o'clock opening hour for small game. In fact many of them are advocating the same regulation for large game.

Fewer hunting accidents also were reported, indicating that the Commission's persistent campaign for safety while in the woods had excellent effect.

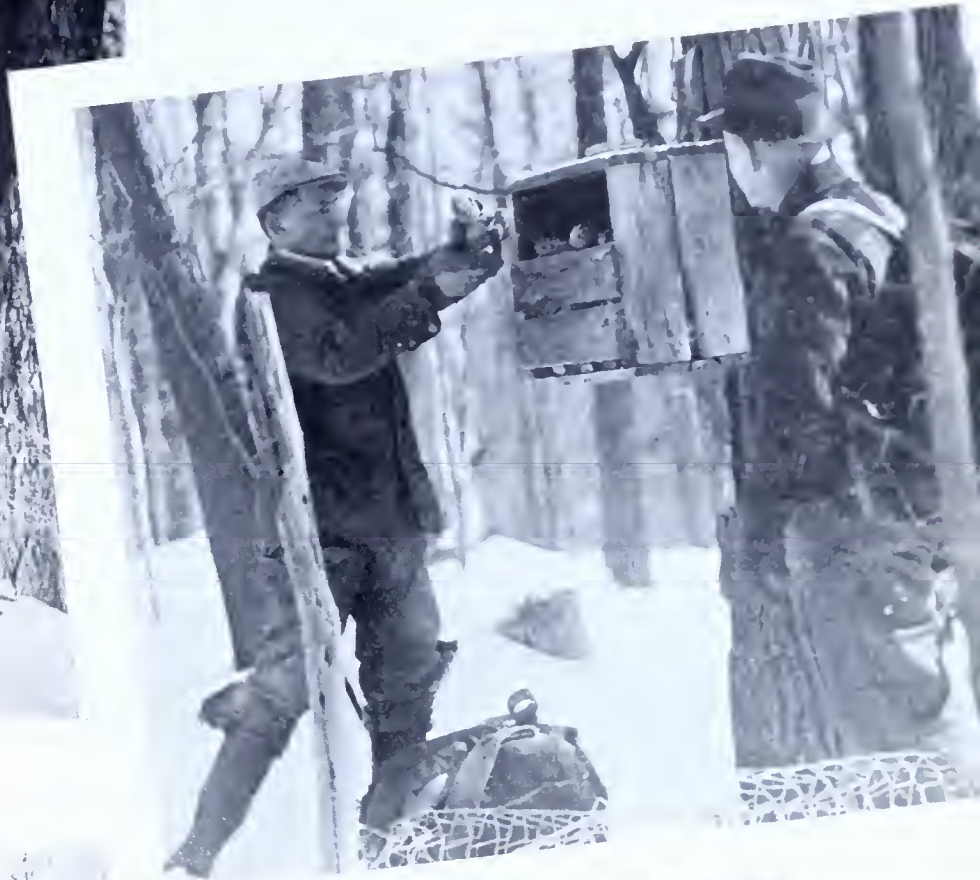
(Continued on page 15)



# Feed the Game



Above: Ray E. Kauffman, left, Mifflin County Game Refuge Keeper, and Ralph McCoy, County Game Protector, placing wire basket feeders.



Above right: Same officers refilling box feeder. Their brother officers in every County are also carrying on extensive feeding programs.

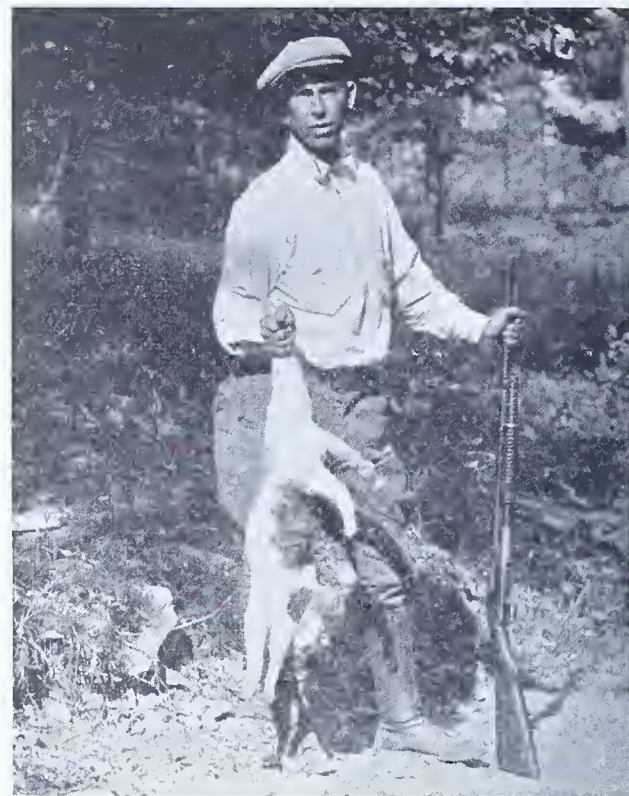


Above: Galvanized food shelter. One of many erected by members of the Wilkesburg Sportsmen's Association.

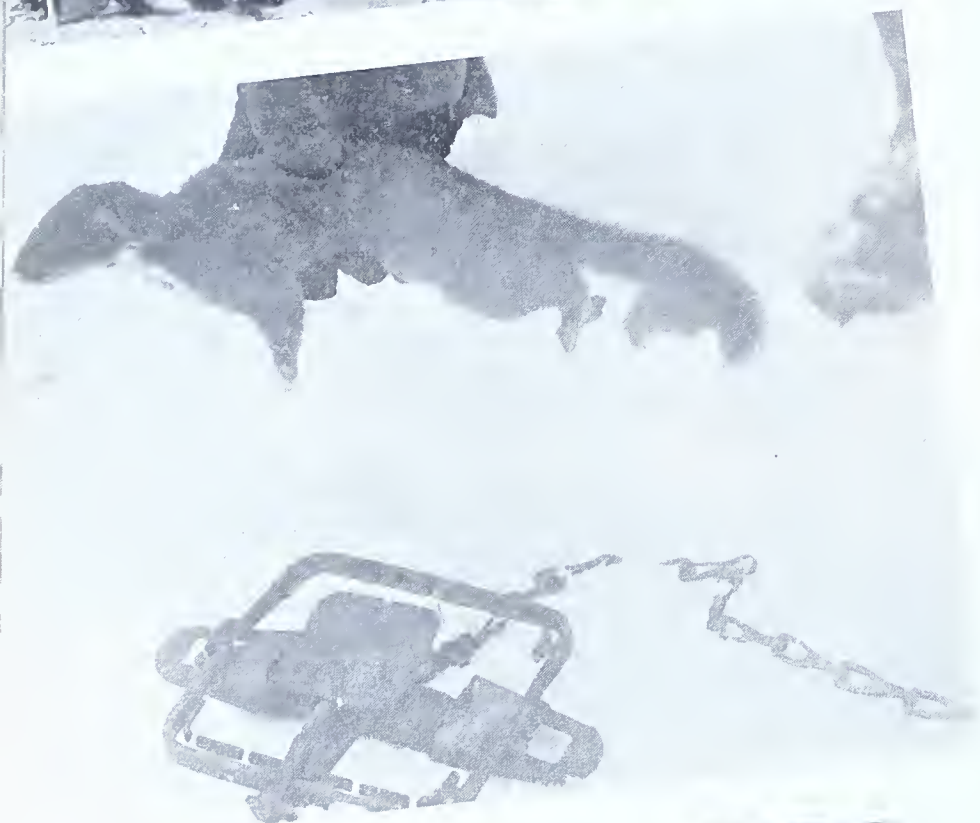


Left: Pocono Mountain hunters began the deer season armed with bales of alfalfa hay as well as rifles. Nicholas Biddle, Game President, is at the extreme right of the front row.





Top: Refuge Keeper George Koehler, Lycoming County, with an extremely large game-killing house cat.



Left top: "Jim Crow Car." Several hundred crows killed by Dauphin County nimrods. Control these marauders.



Center: The weasel is another serious menace that demands the constant attention of sportsmen and farmers.

Left: Kill the stray dog. These vicious, half-starved canines killed hundreds of deer last winter.

# Control its Enemies



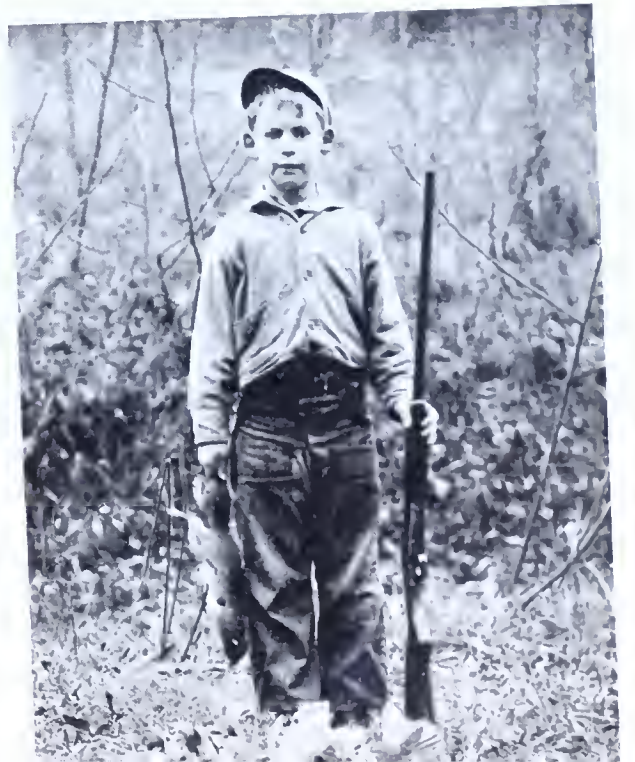
# Enjoy its Sport

Top right: The ringneck pheasant saved the day for small game hunters during the recent season. These birds are becoming more popular every year.

Center: Successful wild turkey hunters check the scales closely to see which bird weighs the most.

Bottom right: Let us set an example for the coming generation by contributing of our money, time and effort to protect wildlife, so that our children's children may enjoy the same good sport this young nimrod enjoyed.

Below: George Lazor, of Alverton, with nice eight-point shot in the mountains near Ligonier.







1. Left to right: George Cross and Carl Wertz, Fish Wardens, and O. M. Deibler, Commissioner of Fisheries with fine trophies taken in Clinton County. 2. Mrs. Clinton Foote, of Shinglehouse, bagged a nice one in Great Bend Township, Susquehanna County. 3. John (left) and Frank Pittenturf, brothers, of Lewisburg, with their big ten-point buck killed in the Hall Run Section of Clinton County. The buck weighed 145 pounds hog dressed. 4. Freak deer killed by George Possinger of Stroudsburg. This doe with antlers was passed by game officials. 5. Three nice ones taken in Clinton County. 6. Oswago Valley Gun Club. These boys hunt in Cameron County. Left to right; J. K. Bridge, Orvin Groso, K. M. Foote, Dr. P. R. Kapp, A. D. Kapp, C. Bonhoff and G. R. Kuhn. 7. Nice head taken by Stanley Foote in Great Bend Township, Susquehanna County. 8. Bear killed by Roy Deremer, Bedford, on Wills Mountain, above Centerville, Bedford County.



# CURRENT TOPICS

(Continued from page 10)

## NEW LANDS ACQUIRED

During the month of December the Game Commission secured title for a total of 8,274.6 acres of State game lands distributed through five counties of the State. This brought the total area of State game lands to 532,732 acres. Two of the purchases provide two additional blocks of State game lands, one in Lycoming County and the other in Monroe County. The other purchases were additions to previously acquired State game lands. The recent purchases are as follows:

**Lycoming County, Armstrong Township.**—591.9 acres purchased from M. N. Shaffner. This tract lies near Williamsport, and has been designated State Game Lands No. 126. Deer, squirrels and rabbits are reported abundant in that section. It is all woodland made up of young hardwoods, including oak and hickory.

**Monroe County, Coolbaugh Township.**—Two tracts totalling 2,162.4 acres, now designated State Game Lands No. 127, were acquired. J. H. and S. E. Shull conveyed 1,647.5 acres and Margaret Shafer 514.9 acres. The tract adjoins the Tobyhanna Military Reservation, and is located near a heavily populated area. It contains excellent trout streams, and deer, bear and grouse are reported abundant. It is woodland. The young forest growth includes beech, maple, some spruce, and there is a good understory of rhododendron and laurel.

**Lycoming County, McHenry Township.**—A tract containing 1,044.4 acres was purchased from John W. Levegood, which is now a part of State Game Lands No. 75. This block of land now contains a total of 19,109 acres, and is in good deer, bear and grouse territory.

**Franklin County, Letterkenny, Metal and Fannett Townships.**—1,437 acres were purchased from C. D. Minehart, which make a very fine addition to State Game Lands No. 76, now totalling 3,812.7 acres. These lands are in very good turkey, deer, grouse and rabbit territory.

**Centre County, Burnside Township.**—J. J. Rhoads and others conveyed 464.6 acres, which are now part of State Game Lands No. 100. This block of land now comprises 3,775.6 acres, and is in excellent deer and grouse territory.

**Cambria County, White Township.**—A tract containing 2,574.3 acres was acquired from the Indiana County Deposit Bank, Mrs. Hattie L. Buck and the Cambria County Commissioners. It adjoins and is now a part of State Game Lands No. 108, bringing the total of those lands to 4,248.2 acres. This block of land is in good deer, grouse, rabbit and squirrel territory, and shows possibilities of becoming good turkey territory.

It is with deep regret that we report the death of former Refuge Keeper John B. Rearick. Mr. Rearick began his services with the Commission October 1, 1921, and retired December 31, 1934.

## FEDERATION MEETING FEB. 12

The Pennsylvania State Federation of Sportsmen's Clubs will hold their annual pre-legislative meeting in the Capitol on February 12, Lincoln's birthday.

Despite the large program of proposed amendments to both the game and fish laws, organization officials feel confident they will be able to dispose of all business during the one day.

In order to assist in every possible way, the Game Commission has arranged to have most of its immediate staff available and its offices in the South Office Building will be open for their convenience during the entire period.

Chief among the matters pertaining to the wildlife management program of the State will be the matter of revising the Game Code to meet present day conditions.

The Game Commission, with the cooperation of the W.P.A., recently completed a dam on Game Lands No. 56 in Bucks County. The dam was completely filled with water on December 17, and will provide a very desirable place for fishing and a resting and nesting place for wild waterfowl. The area impounded is 37½ acres.

## SENATOR NORBECK PASSES ON

Senator Peter Norbeck, aged 66, died at his home in Redfield, South Dakota, on December 20th. So departs one of the best friends of wildlife ever to sit in the U. S. Senate Chamber. Senator Norbeck was neither a huntsman nor an angler, yet he had a deep and sincere desire to restore and perpetuate the out-o'-doors and all that abided in them.

Coming from an agricultural and grazing state he directed his efforts, for the most part, to the farm problem. He became, however, Chairman of the Banking Committee and rendered conspicuous service in the stock market investigation.

It is in the field of wildlife, however, that he will long be remembered and revered by sportsmen and conservationists. As Governor of his native state, he started Custer State Park in the Black Hills and made it a haven for game. As U. S. Senator he conceived the idea for the Mt. Rushmore Memorial, where workers are now cutting the side of a granite cliff to be an everlasting monument to George Washington, Abraham Lincoln and Theodore Roosevelt.

Through him were se-

cured the funds needed to purchase and transplant a small herd of muskoxen from Greenland to Alaska, where once they lived in abundance. He championed the conservation of the sea otter, that most valuable of all fur bearers, fast disappearing from Alaskan waters.

He reintroduced the bill to establish a definite Federal policy relating to wildlife and fought it through several sessions of Congress to eventual success. This is the Norbeck-Andreson Act which stands today as the foundation of our national wildlife policy.

As a member of the Migratory Bird Conservation Commission he early saw the urgent need of a wideflung refuge system in the nesting and resting areas, and he cut much red tape to bring this about. He was one of the pioneer sponsors of and took a leading part in securing the final passage of the Duck Stamp and Coordination Acts. Had it not been for a taxicab smash-up he would have gotten this bill through at least ten years earlier and thousands of acres would now have been restored.

Senator Norbeck commanded the attention and respect of his colleagues because of his sincerity and earnestness. Perhaps more than any one other attribute this was the secret of his success as a legislator.

In their hour of bereavement his family has one comfort in the certain knowledge that Senator Norbeck will live on in the hearts and affections of all lovers of our wilderness areas and the creatures that live therein.

He was laid to rest in the Old Bloomington Church Cemetery near the little town of Platte, close to the north bank of the Missouri River, where he spent most of his early life.



Harrison Mackey, of Horse Valley, had quite a surprise on Christmas morning. He set four traps around a deer carcass and the next morning he had three wildcats. Mackey had been trying to catch a cat for six years and never had any luck until he got them by the bunch. Left, Charles B. Baum, special investigator, and Chauncey Logue, trapping expert of the Game Commission, holding the catch. Right, O. M. Plukerton, bounty clerk.



## CURRENT TOPICS

### FARMERS HEAR GORDON

Seth Gordon, Secretary of the Game Commission, spoke recently before a group of Institutional Farmers at State College on the subject of Wildlife Management on Institutional Land. The convention was designed especially for superintendents, managers, and farm operators of charitable, penal, and educational institutions throughout Pennsylvania. These institutions comprise many thousands of acres throughout the State and most all of them have extensive game preserves. Secretary Gordon outlined ways and means whereby more extensive programs for increasing wildlife could be effected. The land is available and many of the people in the institutions would show aptitude and interest in the various programs.

### WILKES-BARRE RECORD 50 YEARS AGO

There is a tempting variety of game, poultry, etc., in the markets for the Christmas dinner. Pheasants and prairie chickens are \$1.25 per pair, quail \$2.25 per dozen, blue wing teal ducks 75 cents to \$1.25 per pair, rabbits 20 to 25 cents each, venison 25 cents per pound, turkeys 14 to 16 cents per pound, wild turkeys 14 and 16 cents, chicken 10 to 12 cents, geese 14 cents, bear meat 25 cents a pound.

Mr. Tom Shambach, of Middleburg, examined quite a few grouse stomachs this past season and reports that their crops showed tea berries, frost grapes, birch and quaking aspen buds, beechnuts, acorns, chestnuts, and in three cases, laurel leaves and laurel buds. He also examined three bear stomachs and found corn, acorns, beechnuts, sweet fern, and bits of solid beechwood, which was quite a surprise.

Mr. Shambach also reports that red foxes work in teams to catch wild turkeys on Shade Mountain. He watched the activities of one pair and discovered that the one circled the course of the running turkeys and ambushed them while the partner followed the fleeing birds. Later he put an end to these two marauders by some well baited traps.

The Game Commission is about to publish two new bulletins, one on trapping and one on bird protection, bird home building, etc. In order to make these pamphlets as interesting, as attractive and as practical as possible, we ask your cooperation. As a trapper you have no doubt had good success with this set or with that; as a bird lover you probably have devised a unique bird house or shelter. If you have, how about contributing your share to these new publications? You will be given full credit, of course.

### NORTH AMERICAN WILDLIFE CONFERENCE PLANNED

The second annual North American Wildlife Conference sponsored by the American Wildlife Institute will be held at the Jefferson Hotel in St. Louis, Mo., on March 1, 2, 3 and 4. Former Senator Frederic C. Walcott, president of the institute, will preside as general chairman. The second meeting of the General Wildlife Federation will be held at the same time. All sessions are open to the public and everyone interested is cordially invited to attend and participate in the discussions.

There will be three concurrent sessions on all but the third day of this conference. There will be a general session, at which the majority of those in attendance will gather, and at the same time two smaller sessions will attract research workers and wildlife technicians to discussions of studies and management of land and water areas for wildlife.

The first day of the general session will be devoted to a review of the progress of state and Federal programs of the year,



while the second day's session will consider their plans for the future. The fourth day will be devoted to a conference with Dr. Ira N. Gabrielson, chief of the Biological Survey, and other officials, to discuss a joint program of wildlife restoration between Federal and state agencies.

The third day will be devoted wholly to the affairs of the General Wildlife Federation. Much of vital interest to the future of wildlife restoration activities will occur at this session. It is expected that the federation, set up in temporary form last year, will be made permanent this year. Permanent officers are to be elected also and financial and other problems ironed out. This organization is of vital interest to all outdoorsmen and conservationists, because of its tremendous potentialities for good in the restoration of wildlife and its habitat. It is expected that a large attendance will be on hand to offer their ideas and suggestions and help put the federation on a sound permanent basis.

Carl D. Shoemaker, secretary of the Senate Special Committee on Conservation of Wildlife Resources, who has been voluntarily aiding as temporary secretary of the federation, is in charge of affairs concerned with this day's program.

### EXHIBIT POPULAR

The Game Commission's exhibit at the State Farm Show last month created much interest. It was attractively displayed, particularly the central theme which depicted in miniature a panorama of one of the farm-game projects sponsored by the Commission during the past hunting season.

This model showed how the farmers' buildings were protected by safety zones, how the little game refuges were scattered here and there to provide additional food and cover, the kinds of cooperative posters used, etc.

This instructive display was erected by Game Protector Edward W. Stucke, of Philadelphia; Game Refuge Keeper George Koehler, of Williamsport, and Henry Schell, of the Bureau of Education, and all of them deserve a lot of credit for the initiative shown in creating it.

### NATIONAL TRAP CONTEST

The American Humane Association will hold another trap contest during 1937. All traps entered must be delivered to the association, all charges paid, at Albany, New York, before April 30.

Prizes will be awarded on or before July 15. The individual traps winning prizes become the property of the association, but all patent and manufacturing rights remain the property of the contestant. Traps that do not win prizes will be returned if requested. The association will safeguard to the best of its ability all traps submitted, but will not assume responsibility for loss or damage to them.

Warren F. Simrell, Hallstead, for seventeen years affiliated with the Game Commission in predatory animal control, visited the offices last month, the first for many years. Mr. Simrell retired from active service in 1931.

Harold Titus, who has been writing the popular "Old Warden" article in the FIELD AND STREAM magazine each month, made some very favorable comments on the Pennsylvania Refuge System in the December, 1936, issue.

The Game Commission is eager to determine just how many sportsmen's associations held crow killing contests during 1936, and if any record was kept of the number of men participating and the number of birds killed. It would be very interesting to have this data and we will appreciate getting all the notes we can from the secretaries of the various associations.

If you have not kept a record for the past year, please make it a point to do so during 1937.



# THERE HE GOES

(Continued from page 6)

When deer are moving about, open woodlands usually on the sides of ridges are their favorite haunts; consequently we chose the southern slope of the ridge we were on. We had scarcely gone more than a hundred yards from our lunching place when we heard the crack of a twig.

"Deer!" exclaimed Guy in a tense whisper.

And no sooner had he uttered the single word when I observed the approach of a fawn and doe, mincing along about sixty yards to my left. I remained motionless while my pard stealthily crept away to the right; presumably, I thought, to reconnoiter for the possible presence of a buck. As I stood there looking at the two animals, a third came sliding through the trees like an apparition, passed in front of the fawn and stopped just short of the doe. My heart gave a wild thump for I could plainly see antlers on the newcomer. Then the trio moved in unison and stopped again in the same relative positions as before except that the buck's head and hindquarters were hidden by brush. I carefully and slowly raised my rifle and sighted down on the exposed portion of the buck's body, presenting as it did an excellent target even in spite of the poor light.

The crash of the rifle echoed and re-echoed over the hills, but the three animals never moved. Puzzled, I lowered the gun and dazedly rubbed my eyes. Was I the victim of an illusion, or what? No, there they were as clearly outlined as cameos, so I again raised the rifle and let her go. This time the animal lurched forward, then all three turned and sped down the slope.

Guy rejoined me while I was examining a large pool of blood at the spot where the buck had stood. "That baby is badly off," he remarked after a cursory look at the "signs." "Let's get after him before somebody else finishes him," he added.

The trail was wide open for a matter of two hundred feet, for with every jump the mortally wounded animal spilled plenty of blood, so it was no trick at all to follow it. At the edge of the woodland, however, the tracks disappeared as if all three had taken wing. We circled and doubled in vain, besides the tracks of other animals were so numerous that they added to the confusion. Our last resort was to describe a large circle around the point of disappearance and then bisect it. Ten yards from the point where I started the bisection lay the buck, stone dead; a shot through the fleshy part of the neck and another through the lungs.

While I was admiring my kill Guy was busily engaged in scanning the opposite hillside with his glasses.

"Don't move!" he suddenly warned. "There's two deer coming down that hill and I'm trying to spot antlers."

I could plainly see the approaching animals picking their way through the tall bracken.

"That one in front is a buck," Guy calmly announced.

They continued their leisurely approach until within two hundred yards. As we looked on in fascination the doe evinced

signs of nervousness. At the same time I saw Guy lift his rifle and take careful aim. At the resounding crack neither animal moved. At the second shot the doe bounded up over a knoll while the buck staggered a



## QUESTIONS AND ANSWERS

Q. What is the State tree of Pennsylvania?  
A. The hemlock.

Q. What besides grain should be fed game birds when snow is on the ground?  
A. Grit.

Q. Which of our fur-bearers net the trappers the greatest monetary return?  
A. The muskrat.

Q. Is it lawful to shoot into live trees?  
A. No.

Q. Do starlings eat Japanese beetles?  
A. Yes.

Q. Is it legal to hunt vermin, such as crows, foxes, etc., on Sunday?

A. There is nothing in the game laws to prohibit the Sunday shooting of vermin if the hunter is in possession of the proper license and displays the tag. Furthermore he must be in a position at all times to prove that he is hunting vermin if approached by an officer whose duty it is to enforce the Game Laws.

Q. Is it permissible to use an automatic shotgun or rifle for hunting game if the gun is plugged to hold only one shell?

A. No. The game law provides that an automatic firearm is illegal for hunting game and even though a gun of that type is plugged it continues to be an automatic as to type and is therefore illegal.

Q. Is entrance to the Game Commission training school open to all applicants regardless of residence?

A. No. Only residents of Pennsylvania are eligible to enter the school.

Q. Is it necessary to obtain a Federal permit for possession of mounted specimens of migratory birds after State permit has been secured?

A. Yes. A Pennsylvania permit does not entitle one to the possession of protected migratory birds unless a Federal permit has also been obtained. This permit can be secured from the Bureau of Biological Survey, Washington, D. C.

Q. Are the nighthawk and the whip-poor-will the same bird?

A. No. They are two separate species, the nighthawk being distinguished by a white spot under each wing. The nighthawk lives in the towns and cities, whereas the Whip-poor-will is found only in the deep woods.

few feet on rubbery legs, and then slowly settled to his haunches. In a few seconds he was up again, wobbled a dozen feet and then gently dropped to the ground. Upon examination it was found that both shots had passed through the base of the neck, one of them severing the jugular vein. I called it pretty tall shooting, considering the distance of the animal, exactly two hundred and ten paces away.

While we were busily engaged preparing the two bucks for transportation to the highway, a deer drive was started at a point below us. The din was terrific, reminding one of a bunch of professional hog callers. We went on with the work at hand.

A furtive rustle in a nearby covert caused both of us to straighten from our tasks. Guy looked at me and was about to say something when from out of the cover, not more than fifty feet from us broke a wallowing big buck. Striding ahead of the impeding growth he paused to look back over his shoulder, long and disdainfully. Even in my delirium I accurately counted eleven distinct points on the massive rack. Yes, a trophy of a life time, and literally within poking distance of a rifle. For a full minute he stood there surveying the valley, then with a thrilling bound, he was gone.

"T—there he goes—," stammered my pardner.

"Yep, there he goes," I echoed weakly.

"Oh, well, the chances are we wouldn't have seen him if we hadn't shot these," came the philosophic rejoinder.

"And besides these young bucks will be doggone better eating," I added with an attempt at cheerfulness. "But—"

"But—you said a mouthful."

## DO YOU BELIEVE IN SIGNS?

(Continued from page 7)

lowing the example of the juniors in preparing for the same.

Hunters, your future sport is largely in your own keeping. If you are a "gunner," become a sportsman. If you are an inactive sportsman, be an active, better sportsman. Work with the boys and girls of families where pioneer work in conservation may be done. Visit that farmer on whose lands you would hunt, and make the call during closed season. Learning to know one another will smooth the way for many later happy days. If you are successful in your hunt, offer him a rabbit or a bird. The chances are that he will not accept it, but the gesture will be appreciated. Invite him and his wife and his neighboring landowners and their wives to an annual sportsmen's-farmers' banquet. If he has an odd corner where a planting can be made, buy some evergreen trees and plant or help him plant it. Good-will and better sport will result. Trees are cheap, but good-will is a most treasured asset.

Signs—While we may not believe in them, may we never find them reading "Sportsman Stay Out." Where we do find them, may we look to a past record in sportsmanship which has made a friend of the farmer, and which will gain us admittance—after we request it in fitting manner.



# WITH THE CLUBS

## LOST



**LOST**—One English Setter bitch. Escaped from kennels of Donald S. Hopkins, Lock Haven. Light blue belton, with tan spots on her muzzle and legs. Had on her collar Clinton County license No. 635. Answers to name of "Bert." If located, notify either Mr. Hopkins or the Game Commission.

**LOST**—One male coon dog, weight 45 lbs.; color, dark red with white stripe under the neck. On hind foot there is one red and one white toenail. \$25 reward is offered to anyone informing the owner, Harry Mouck, R. F. D. No. 1, Punxsutawney, Pa., of the dog's whereabouts.

Breeders of game birds will stage one of the largest displays of this kind as a part of the Philadelphia Sportsmen's Show, March 29 to April 3. J. Allen Gardy, of Doylestown, Pa., is arranging this exhibit and has enlisted the participation of prominent fanciers of game fowl throughout the country. This show which has been held before in conjunction with the annual Sportsmen's Show in Philadelphia, is mainly for educational purposes. Most of the breeders have stock for sale, but will show rare varieties which are not on the market and are scarcely to be found outside zoological gardens and natural history collections.

Mrs. Wikoff Smith, of Bryn Mawr, Pa., sportswoman and amateur fancier of fine game birds, will display some recent importations of birds of pheasant and partridge species obtained in Northern India. Mrs. Smith has acclimatized them to outdoor life on her estate in the suburbs of Philadelphia, where she maintains her valuable ornithological collection.

Waterfowl as well as land fowl will be shown, in this and other exhibits that are parts of the Sportsmen's Show in Philadelphia. Live and stuffed game animals, birds and fish will form varied exhibits.

Besides these, the Philadelphia Motor Boat and Sportsmen's Show will have its largest display of interest to all those who find recreation outdoors and indoors. The show has the active support of outdoor sportsmen, nature conservationists, game protective and propagation bodies, such as the Izaak Walton League, the Pennsylvania and the New Jersey State Fish and Game Commissions, the U. S. Biological Survey, the Wildlife League and many others.

All forms of sport will be represented in

the Philadelphia Motor Boat and Sportsmen's Show, from big game shooting, log rolling, and other "he-man" sports of the backwoods, to badminton and table tennis. The show will be held as usual in the vast Commercial Museum building, which has over three acres of exhibition space all on one floor. In the center will be a tank for water sports, including fly and bait casting, canoe tilting, log rolling, etc. Some of the foremost casters in the country, amateur and professional, will be there.

More exhibitors than ever, and from a wider radius, have taken space in the show, and the show committee, headed by Clinton W. Smullen, expect this year's attendance to break last year's record of over 80,000 people.

Members of the Ontelaunee Rod and Gun Club shot five bucks during the past season, all of which were neck shots. Quite a nice record.

Another man paid the penalty for careless shooting during the 1936 deer season. He was James D. Sweeney of Clarion, who was prosecuted for the killing of Harry Clinger of Helen Furnace, and sentenced to five years in jail, to pay \$1,000 to the widow of the deceased as well as the costs of prosecution, and ten years revocation of his hunting license.

At the culmination of the case, which was so efficiently handled by Judge Harry M. Rimer of Clarion, Mr. Sweeney was paroled for the five year period but will be required to fulfill all the other obligations of his sentence.

Four hundred crows were killed recently by twenty members of the Lycoming Sportsmen's Association. The birds were shot on their roosts in the vicinities of McEwensville and Washingtonville.

Mr. Leslie D. Champion, Slippery Rock, Pa., says an albino doe has been seen frequently in that vicinity.

Here's a note from an interested sportsman: "Is there any way you gentlemen can work out a method whereby you furnish an annual subscription to the 'Pennsylvania Game News' as a part of your license charge? Perhaps some legislation allowing you to increase the license rate enough to pay for the publication would have to be your method. It seems to me your publication would be very valuable among a lot of hunters and make them more interested in preserving game than is the case with a great many of them."

A champion of the lowly groundhog who feels the little fellow is being hunted too assiduously has suggested that: The groundhog be placed in the game animal class with an open season on him from June 1 to September 15 each year, with a limit per day, and that the trapping and digging of groundhogs from their natural dens be prohibited.

Sportsmen, what do you think of these suggestions?

Ralph Klinger of Shamokin killed an albino deer in the White Deer section of Union County.

(Continued on page 19)



Edgar Oswald, 19-year-old Nazareth hunter, brought down this splendid eight-point buck with a bow and arrow. Oswald's deer weighed 160 pounds.



# WITH THE CLUBS

(Continued from page 18)

Mrs. W. C. Evans, Plainsville, put the fourth niche on the stock of her trusty deer rifle this season. She killed a fine four-point near Clifton, Lackawanna County.

During a recent controversy between one Mike Ellis, Harrisburg, and Game Protector Mark Motter regarding the killing of a spike buck, Mike contended the animal should be legal because it could stamp, snort and indulge in various other antics the same as an eight-pointer he killed several years ago. It cost Mike \$100 to learn that a hunter cannot be governed entirely by signs and sounds in the woods. He has to see what he is shooting at.

A Michigan farmer leaned over a doe wounded by another hunter. The deer kicked the trigger of his shotgun and another fatality was added to that state's list of hunting accidents.

Thomas Kockle of Seyferts shot a 17-point buck in Sullivan County that had only three legs. The other one had apparently been shot off during a previous hunting season.

In a whirlwind visit to Bedford the other day, a frightened young deer broke practically every borough ordinance, a few Federal statutes, and several laws of the Commonwealth before escaping over the hill into Bedford Township.

The charges that might be lodged against this young, very frightened fawn, will include the following: Speeding, hitting and running, breaking and entering, interference with the U. S. mails, trespass, and running, not only on the wrong side of the street, but all over the street.

The following note appeared in an issue of the "Punxsutawney Spirit" forty-four years ago:

"Sol. Roach and Jim Brewer, who have been out in the mountains for the past five or six weeks on a hunting expedition, re-

turned yesterday. The quarry slain by these worthy disciples of the great Nimrod is reported as follows: Twenty-seven deer, two bears, seven wildcats, fifty-nine coons, eighteen porcupines, seventy-nine pheasants, and squirrels and rabbits by the score."

This incident happened in 1893, just two years before the Board of Game Commissioners was established.

The 1936 hunting season is closed. The season for real sportsmen and conservationists is now OPEN; in fact, it is never closed.

There are many things to be done: Trapping, building game shelters, feeding game, planting food, cooperating with local game protectors, etc. The purchase of a hunting license alone will never restore hunting. In fact the fee is all too small for the benefits received from it. The proposed increase of this fee to \$2.60 should have the hearty support of every sportsman so the Game Commission will not have its hands tied and can go ahead with extensive plans to conserve our game.

This increase is only the price of three packs of cigarettes, or the admission to one ball game, but the added sport it will give is worth much more.

Surely sportsmen of the present generation will work together to pass on to their sons the heritage of the great outdoors.

Members of the Consolidated Sportsmen of Lycoming County put out a fine poster prior to the small game season. They visited among farmers who were posting their lands and succeeded in getting them to supplant their no-trespass signs with the association's cooperative posters, which read as follows: "Take Notice, You Are the Guest of the Owner. Protect Him—Respect Him—Thank Him. Be Careful—Be a Sportsman. Prevent Fires.—Sponsored by Consolidated Sportsmen of Lycoming County.

Richard Massam of York had to swim for his buck. He shot it on the bank of a creek and the impact of the bullet sent it hurling



Unique deer head. Photo by Anthony Lech, Fish Warden, Cressona.

into the water. The swift current carried the carcass down stream and Massam and his companions followed along the bank hoping that some method would present itself whereby they could get it out of the water. It began to look hopeless, however, and rather than lose the animal, Massam took off his heavy clothes, swam after it, and brought it back to shore.

Over 500 sportsmen attended the State Live Bird Shoot held at the South End Gun Club, Reading, on New Year's Day. Earl Brightbill of Harrisburg won the championship by killing 20 consecutive birds. Another large shoot will be held at the same grounds on February 22.

Ira E. Mellinger, President of the Lancaster County Game and Fish Association, recently retired from that office. Mr. Mellinger was succeeded by Charles Dornbach.

In answer to the question in a former issue of the GAME NEWS as to what the sportsmen think of the common guinea fowl as a game bird, Mr. Frank W. Preston, Butler, submitted the following:

"I have hunted these birds in Central Africa where we regard them with a great deal of favor. The birds are usually found in sizeable flocks and can commonly be located by their calling. When disturbed they attempt to escape by running, much as a turkey does, but if pressed sufficiently hard they take to the wing and are much stronger in flight than the francolins, which were our other principal game bird. Finally, when cooked, guinea fowl is excellent both in taste and in the amount of meat on a bird."

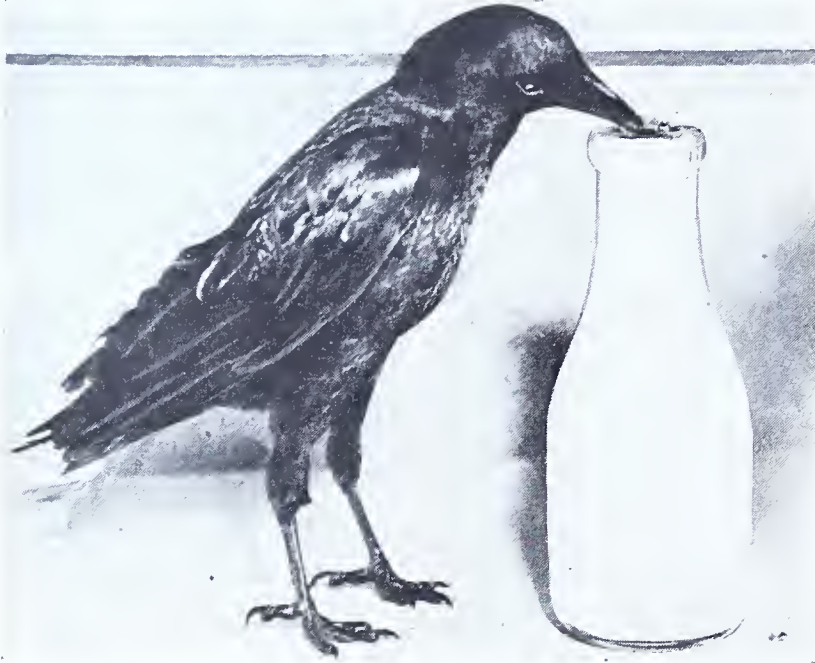
Sportsmen in one of the northern counties point out that hunters from the southern counties who hunt up there every year should help in their winter feeding programs. Those who have camps and make frequent trips to them could easily do a little feeding each time. Those who do not get up north during the winter could contribute financially.



Sportsmen from Dauphin County launched a large winter feeding program on New Year's Day. It was sponsored by Ken Thomas, sports writer of The Telegraph Newspapers, Harrisburg.



# SCATTER LOADS



*Photo Courtesy Nature Magazine.*

**The thief caught at last.**

The Division of Fish and Game of Indiana received 2,324 reports from sportsmen who participated in the three-day open season on pheasants, November 10, 11 and 12. While these reports represent only a small percentage of the thousands of hunters who were in the field during the three days, they are indicative of the sport which was enjoyed and the wide distribution of pheasants over the state.

On the basis of the reports received, the hunters averaged one and a fourth cock pheasants apiece, while they saw an average of six birds. A total of 2,891 cock birds were taken and 13,857 were seen by the 2,324 hunters filing reports.

Mr. E. F. Masse of Cambridge, Mass., is doing a lot to boost GAME NEWS circulation up there. He has sent in over twenty subscriptions so far.

North Dakota's Junior Game Warden League has solved one of the educational problems of that state. Young people are thus taught all about wildlife and how to protect it.

The largest take of deer in New York State since the special deer license law became effective in 1926 and also the largest total since 1924 was reported by hunters for the 1936 season. There were 8,756 as compared with 7,162 a year ago.

The State of Michigan figured its deer hunters spent over \$2,000,000 during the past season. These figures were based conservatively by allowing one day on the road coming and going, three days in the woods, and an average expenditure of \$5.00 on the part of the 100,000 licensed hunters who took out licenses to hunt these animals.

In Union County, Ohio, H. L. Snapp, Superintendent of the schools of New Dover Township, legalized "hookey" for the opening day of the hunting season. He told all young sportsmen that, parents willing, they might pass up the three "R's" to go hunting.

Dr. T. Gilbert Pearson, President emeritus, National Association of Audubon Societies, in his recent report on international bird protection clearly indicates the need for more migratory bird treaties. His research among the West Indies, Central and South America reveals only too vividly the ones in North America are saving at the spigot and wasting at the bung. We deny our own people the right to shoot, while others south of us slaughter.

Our shore birds, partially, are paying the penalty of our own shortsightedness. We must get busy and encourage our southern neighbors to cooperate by permitting only limited seasons for these and other migratory specimens in this country.

Today they have few if any laws protecting migratory birds and shooting seasons extend seven and eight months. We need more international treaties.

How to raise wildlife crops will be a new subject of instruction in the program of agricultural extension education in which the 3000 county agents of the country and the State Extension Services play the major role. This is the result of the appointment of I. T. Bode as senior scientist of the Extension Service, U. S. Department of Agriculture, according to a recent bulletin of the American Wildlife Institute. It will be Mr. Bode's job to provide these extension workers and other agencies with information on the development and management of wildlife crops, and to organize and develop teaching and demonstration among farmers and 4H Club boys in the matter of wildlife as a land use factor. He will work for the employment of wildlife specialists in state extension work and will also seek the cooperation of agricultural specialists of other lines.

The business of fishing and hunting in California was estimated during the past year at about \$63,000,000. Next year it is expected that this figure will be boosted to \$80,000,000.

Butterfly wings photograph themselves automatically when laid in contact with an unexposed photographic plate and kept in the dark for 24 hours.

In 1925 a small but determined group of sportsmen-conservationists laid the foundation for the present form of game administration in our state, patterned somewhat after what was known as the "Pennsylvania system." These pioneers were not given a great deal of encouragement by hardheaded politicians and business men, who regarded the plan as too visionary and idealistic to stand the "acid test" of practical application.—Outdoor Indiana.

The board recently employed the following individuals:

P. M. Lollich, of Williamsport, to assist with the supervision of the work in the drafting room, also the surveys and other engineering activities of the Game Commission. Mr. Lollich received his early education in the public schools of Fremont, Nebraska, and the Kearney Military Academy, Kearney, Nebraska. He studied forestry for two years in Colorado College, and two years later was graduated from Wyman's Forestry School, Munising, Michigan, at which time he received his F. E. degree. He also studied civil engineering.



# SCATTER LOADS

(Continued from page 20)

## New Literature

*Wing Shots:* By Albert Dixon Simmons. (The Derrydale Press.) A series of camera studies of American game birds and other birds of field and stream.

*Tranquillity:* By Col. Harold P. Sheldon. (Derrydale Press.) This book contains 14 tales of sport with the gun, the backgrounds of which are nearly all laid in one sleepy old township in Vermont, to which the author has given the fanciful name of Tranquillity.

*More Songs of Wild Birds:* By Albert R. Brand. (Thomas Nelson and Sons.) The same author produced SONGS OF WILD BIRDS a couple of years ago and was encouraged to prepare this companion volume which contains two extended introductory chapters on the topics of sound recording and the significance of bird song, followed by the ornithological descriptions of forty-three birds whose voices are reproduced on three double-face phonograph discs which accompany the book.

Mr. Ray V. Laudenslager and Robert Ebling, both of Weatherly, shot a deer in the same spot. Laudenslager had the first shot and swore he made a bull's eye because the animal stumbled and fell. However, it got on its feet again and Ebling shot and killed it. Upon examining the buck, they found only one hole. It turned out later that both the shots had entered the deer in exactly the same place.

*Poisonous Snakes of the United States:* Wildlife Leaflet B S-70. Biological Survey, Washington, D. C. This 19-page leaflet should be in every sportsman's library. It describes every species, their venoms, fangs, food, habits, young, and many other interesting facts about them.

*Some Suggestions for Bird Study:* A very interesting leaflet published by the Biological Survey and known as BS-76. All persons interested in amateur ornithology should write for a copy of this circular, which also contains the names of many other valuable books on birds.

*Our Friends the Trees:* By Dr. P. G. Cross, is a book of scientific accuracy, literary accuracy and charm. Besides being a distinguished scholar in other fields, Dr. Cross has studied and tended trees as a special hobby for many years. The book is designed especially for those who want to know how to take care of their own trees and contains many charts and information on pruning, spraying and transplanting. E. P. Dutton and Co., Inc., New York City.

*Common Mushrooms:* An excellent, inexpensive booklet with the above title has been prepared by Leon L. Pray of the Field Museum of Natural History, Chicago. Those interested in mushrooms as a food will find it valuable as a means of identifying the commoner species of edible and poisonous fungi.

*Nature Study Projects:* Many interesting projects for Nature study work are suggested in detail in a 65-page mimeographed pamphlet brought out by the National Youth Administration in Minnesota, 312 Minnesota Building, St. Paul. The objective of this publication is to direct attention to the possibilities of Nature study for youth both as a means to providing activities and to provide a background of Nature appreciation in the interest of conservation.

*Farmers' Bulletin No. 1759, "Game Management on the Farm":* Deals mainly with good sportsmanship and improving wildlife environments on farms and was recently placed in circulation by the United States Department of Agriculture.

Richard C. Downes, 240 Clark Street, Lemoyne, Pa., as a draftsman. He will fill the vacancy made by the resignation of his brother, "Jack," who is most favorably remembered by the Commission's employees. Mr. Downes was educated in the public schools of Steelton, at which institution he specialized in machine drawing.

The delicious meat and fine fur of the raccoon is nothing compared with the thrill, enjoyment, and sport he gives the sportsman and his dog. His elusiveness is about the only defense he has. However, he is not any more wily about traps than an old Tom cat, therefore he is very easily caught—for profit only.

My hunting partner is as red blooded a sportsman as I am and in many instances after the chase ended we were satisfied to say: "Hello, Mr. Coon, you did fine. Hope we can repeat this some time. Good-bye." Then we chained up our dogs and went home just to learn that a rabbit or squirrel hunter came along, spied Mr. Coon in the same tree, and knocked him out with a shotgun. In some cases it takes six to eight shots, No. 6 and 7, to get him down, and then he escapes in the woods probably a cripple for life.

In other instances our dogs treed coons and we took them alive and kept them until after open season and liberated them to give either us or some other real sportsmen a good thrill. Then we learn that some fur seeker, for the sake of the dollar, came along with his traps and again used foul play, as I name it. My partner and I liberated several pairs of coon in the spring of the year. During the open season our dogs treed some of them, but I took the dogs away in order to let the coon spend at least one breeding season in the wilds. As a result the fur prospectors raked that section and picked 'em up right and left with their traps.

Coon are mighty scarce in our part of the State, just scarce enough for the real sportsman to get a good thrill when his valuable dog is fortunate enough to get a chase and has enough brains to finally tree it.

I do not want to criticize the Game Commission in any way, and I'm no organization or club and need not be recognized, but I would suggest, or be delighted to see, an act providing that coon could only be legally taken with a .22 calibre rifle and dog, from sunset until sunrise, six nights a week.

The old saying is "A bird in the hand is worth two in the bush," but in my opinion, a coon in the bush is worth two in the hand.

I've run my dogs in the woods twice this season and each time one of the dogs opened up in such a tone that I thought he had caught a coon on the ground. I quickly hurried to the spot to find the dog caught in a trap.

If we are unable to prohibit coon trapping, I think we'll have to swap our dogs for traps and get down to meat and fur instead of sport.—G. W. C., Schuylkill County.

This little cub wasn't satisfied until the photographer let it climb the tripod.





# CONTROLLING THE CROW

By RALPH E. WILSON



Cornshock crow blind.

**E**ACH year crow shooting is becoming more and more popular with the majority of sportsmen. Not long ago the idea of attempting to kill any large number of crows by using the ordinary shooting method was laughed at. Only an occasional crow was killed by the hunter, and then only by chance. The farmer would kill a few of the black marauders if he caught them stealing young chickens or eating his newly planted corn. But as a rule there was little or no time spent in pursuit of these elusive robbers. The crow's habit of destroying the eggs and young of all types of game birds, and in a few cases young game animals, was well known at that time, but nothing much was done about it.

The advent of the crow call changed the picture entirely. It brought within the reach of every gunner a clever means to outwit old Corvus and his flock. With the improvement of the call came organized shooting.

The first year or two, with only a few hunters using calls, furnished some rare sport. All one needed was the thinnest kind of cover in any decent crow section and a few blasts on the call, and you had all the sport you could handle within a few moments. They were easily called but not easily hit, however, and the nimrod who was an expert game shot often found himself shooting holes in the air on all sides of the crow and not doing much damage to the bird. It was different than any other form of shooting he had ever experienced and each miss taught him a lesson, and he soon acquired the knack of bringing down most of the birds coming into range. Although all shots looked easy, overconfidence cost many kills.

In a few years this form of crow shooting became one of the most popular sports in the country. It developed the shooter's ability and helped control a winged menace.

After constant shooting, however, the crows would not respond as readily to the call as they did in the beginning. Also, better hiding places for the gunners were absolutely necessary for the success of any shoot. Today the better the hiding place the better the shooting. **Be well hidden when calling and shooting.**

If there are crows in your immediate locality, good shooting can be had at all times of the year. It is a sport that knows no season.

"Spot" your shooting during the day by going from place to place and locating smaller flocks of feeding crows. Find a suitable hiding place and use the call to bring the crows within shooting distance. A mounted owl makes an excellent decoy and if placed, on a tree or dead snag so it will be plainly visible to the incoming birds it makes them lose the caution for which they are so widely noted. The fury with which they mob live owls and hawks

makes them doubly susceptible to this type of decoying. Stuffed crows or those made from sheets of black metal are also excellent decoys.

The crow is one of the most gregarious of birds and for this reason "flight" shooting is productive of more sport than any other method. This, of course, takes place more during the winter months when they are gathered together for feeding purposes. After the feeding day is over the crows start their flight toward the roost. This takes place one hour, more or less, before sundown. Spotting a flight and following it toward the roost is not a hard thing to do when the birds are around in great numbers.

On a clear day these flights may be seen for miles and following them is not a hard job. They do not fly directly onto the roost, but usually to the fields surrounding the woods patch in which the rookery is located. A good hiding place not too close to the roost is ideal for evening shooting, and at the sound of the crow call they seem to appear from all places. At this time of the

day they are usually well fed and very cocky; an ideal set-up. Good shooting may be had at such a place until it is almost too dark to see the end of the gun. And then, if the exact location of the roost is known, a considerable number of the birds may be killed from the roost.

The roost should be approached as quietly as possible, and advantageous positions around it should be taken by the hunters. The group should be headed by someone and at his command the first volley is fired.

Safety of the members of the group is much more important than any other thing and for this reason no shot should be fired before the command is given, nor should any gun be discharged in any other direction than toward the tops of the trees or at the birds as they leave the roost. **There should be no attempt to shoot any crippled bird on the ground. The "clean up" can be done later.** If there are several wood patches in the vicinity the crows can be chased from one to the other for sometime before they will become too scattered for good shooting.

By walking quietly through the woods the hunter can shoot the single returning birds against the outline of the sky. A clear night when the moon is not quite full is the best time for roost shooting. If future shooting at the roost is to be had at a later date it is important that all the dead and crippled birds be removed from the vicinity as soon as possible. If this is not done the birds usually change their rookery to another woods which will be harder to locate and get to.

Crow shooting contests among organized sportsmen is becoming one of the most popular outdoor pastimes. Teams from different, or the same clubs, compete for prizes or dinners which are furnished by the team which fails to bring in the most dead crows.

A statement was issued by the newspapers some time ago to the effect that the Game Commission was contemplating a statewide program of crow control through the use of dynamite. Unfortunately this item caused considerable alarm in that the real intent of the Board was not clarified. The use of dynamite was suggested, but only as a possible experiment in and around crow roosts.

Not for a moment would the Game Commission consider the use of any method in destroying wildlife, protected or otherwise, until it was found basically sound. Even if dynamite were considered as a practical method of combating the crow in cases of emergency, it would be handled under the direct supervision of game officials in such manner as to effect a quick and humane solution to such emergency.



# WILDLIFE TECHNOLOGY

(Continued from page 9)

Knowledge of the relative importance of the various constituents of wildlife subsistence naturally led to efforts to increase the more valuable kinds. These efforts developed in one direction into recommendations as to choice of kinds, as to care of propagating material, and as to where, when, and how to set out valuable wild-duck food plants. Later, plants affording refuge shelter and nesting cover were included, and the technique, in effect, became one of general improvement of the environment of wild fowl. These recommendations were acted upon extensively through a long series of years and resulted in great improvement of some properties (up to a tenfold increase by the financial scale), and are now serving as the basis of development and improvement of the vast new system of Federal migratory bird refuges (over 100, totaling more than 1,600,000 acres, within the limits of the 48 States, excluding island refuges). Recommendations as to the value of marsh and aquatic plants and as to methods of propagating them have been of value also to a branch of the fur industry, namely muskrat farming. The demand for these plants, largely created by publications of the Biological Survey based on food-habits research, is the mainstay of a business of supplying propagating material that at times has attained considerable volume.

In another direction data provided by the technique of food-habits research made possible the preparation of a long series of publications on methods of attracting birds. These were intended primarily for people desiring to increase the number of birds about their homes—an esthetic consideration, but certainly of social importance, as it contributes to the enjoyment of life of probably half of the families in the United States. The attractive bird bulletins and leaflets dealt largely with fruits, the increase of which would be helpful, but gave some attention to plants producing relished seeds and to artificial feeding. From the former beginning has developed a publication on "Plants valuable for wildlife utilization and erosion control," which treats the whole gamut of wildlife plant utilities including cover, browse, herbage, mast, fruit, and seed. This presentation places at the disposal of the wildlife manager basic information of a type essential to the success of his work, but not heretofore available. The artificial feeding suggestions have been expanded into a publication on "Winter feeding of wildlife on northern farms," and about all threads of environmental amelioration have been woven together in the text of a Farmers' Bulletin "Improving the farm environment for wildlife."

In the actual practice of wildlife technology, the environmental improvement technique has developed into the covey-unit system of quail management. This concept, taking into account also territorial requirements of the birds, aims at the creation, by alteration of the environment, of additional "territories" each having facilities for the year-round support of a covey. Putting the system into effect for a few years has in some instances, produced a larger number

of coveys than had previously been seen for 40 or 50 years. Intelligent application of the covey unit of range system seems essentially to have solved the problem of quail management, and the principles involved obviously have a place in the management of all relatively sedentary forms of wildlife. Such species are the objectives of most upland wildlife management, applied on farms, and on private and public shooting preserves, procedure of financial and recreational interest to all farmers and sportsmen concerned, and therefore of distinct social value.

The technique of food-habits research necessarily deals with injurious as well as useful feeding habits of wildlife and thus has led to study of material damage done to crops and other property and of methods of preventing or controlling it. From this beginning developed all the control practices that have been perfected in the Biological Survey, for years a major activity of the Bureau. The wildlife manager, from time to time, has need for information on control procedure, and it is ready made for his use in any emergency.

## *Wildlife Technology in Conservation*

The technology of wildlife management pervades the whole field of wildlife conservation. It is as necessary to success in pure conservation as in management for use. Wildlife refuges, for instance, cannot serve their highest usefulness if merely established and forgotten. Without attention they may readily change into something quite different from what was planned. Unless there is pruning and thinning, trees and shrubs will "take the place," thus changing conditions vital for wildlife occupation. Animal populations will fluctuate, and without attention to these changes in numbers and the resultant effects upon the carrying capacity of a terrain and the interrelations of organisms, the area may turn out to be anything but a haven of safety for the animals it was intended to benefit.

The relations between wildlife and its habitat are dynamic, and where the production of annual crops of wildlife, particularly production for profit, is the object, unremitting attention to the balance between environmental factors, in a word the thoroughgoing application of wildlife technology, is essential to success. Conservation in any degree can best be accomplished by due attention to dynamic ecology. To the forester, the soil conservator, and the land utilization specialist, wildlife production is an incidental but potentially important activity, while to the game manager it is the prime objective. All classes of owners of land upon which wildlife may be conserved for its own sake or managed for utilization, whether Nation or State, association or individual, farmer or sportsman, have need for, and may profit from, the technology of wildlife management.

A technology so universal in application necessarily has great social significance. It offers the only hope of settling the vexed question of farmer-sportsman relationships, upon which depends entirely the possibility

of widespread realization of income from the wildlife crop of the land. Development of a satisfactory system of managing and marketing farm game might be the means of transforming many a marginal farm into a productive one. Wildlife technology will help solve problems in land-planning and soil conservation, the prompt and correct solution of which is essential to national prosperity. It points the way to diversification of forest use that may yield income based on wildlife production from timbered areas, which although properly and necessarily preserved by the nation, may return little, except at long intervals, from tree products alone. The proper functioning of every bird refuge and game preserve, of the system of wildlife protection in the national parks, and of animal conservation in general depends upon wildlife technology. That puts a great burden upon this comparatively young applied science, but it is gratifying that its capacity to bear appears to be in proportion to the load. As closely as wise utilization may be related to material advantage, so the preservation of our wildlife in as great measure as conditions will permit, is essential to the esthetic and spiritual welfare of the nation.

## DRESSED ROOK

"Dressed Rook 25c each." Such was the advertisement appearing last fall in a Denver, Colorado, meat market over a show case in which were displayed, along with choice poultry, a smaller, darker bird—rook, says the American Wildlife Institute.

Some time ago we reported an American Legion banquet in Denver at which Gurney I. Crawford of that city served the "comrades" their first crow dinner. So well did the Legionnaires take to it that he tried them on others and eventually decided to put them on the market.

The dressed rook business has boomed.

In the Old World a rook is known to be a young crow and has been relished as an item of diet for generations. In this New World he has never attained the same kind of popularity. He has been looked upon not as a choice tidbit but as a ravaging scoundrel to be shot at sight, or rather opportunity. While New World game species were being decimated in a thoughtless advance of civilization, the crow prospered. Besides he aided and abetted the decline of game by preying on the luckless eggs and helpless young of more desirable species.

Old corvus has been a pest in the past. Now having attained a new, more dignified and valuable status, his black carcass is held at a premium. Soon perhaps there may be a scarcity of crows, but their ranks may well be thinned down considerably.

Game Warden—What's the idea of hunting with a last year's license? You know better than that, don't you?

Hunter—Nothing wrong in that, as far as I can see. I'm only shooting at the birds I missed last year.



sible that the average annual kill within the State will not be greatly reduced, due to the educational effect of the goshawk payments to date. Examination of the records will show that from 1930-1935 over 64 percent of all goshawks presented for bounty were killed during the months of November and December, and during the period in question the Pennsylvania small game hunting season usually extended from November 1st to 30th and the big game season from December 1st to 15th, both dates included and all Sundays excepted. Since almost all goshawks are taken with guns and since many of the specimens presented in December had obviously been killed with high-powered rifles, it appears that many of the birds are taken by persons principally in pursuit of game. Thus, having learned to identify the goshawk and having been impressed with an idea of the absolute necessity of its control, it appears that the hunters will continue to kill the goshawks regardless of whether or not a bounty is paid for so doing.

Also, while considering the goshawk, another point is of interest. It is known that goshawks do kill many grouse, but it is not definitely known that the removal of some grouse by the hawks is entirely undesirable. For example, during the winter of 1935-36, there was a heavy southward migration of goshawks. During the same period, the grouse population of the State was at or near the peak in its cycle and the number of birds sent in to Harrisburg for examination after being picked up dead, indicates that some of the grouse were possibly even then succumbing to the effects of the approaching down-swing of the cycle. It is known that many grouse were killed by goshawks, but the condition of the birds so taken is unknown. Were they in poor condition and about to succumb to cyclic effects? Did their removal from the flocks tend to retard the devastating effects of the cycle? Such questions cannot be answered, but they strongly indicate the need for increased amounts of basic game research.

## 2. On Wildcats

Because the bounty has not only brought the wildcats under complete control, but even placed the species at a point on the verge of extinction, the payment of bounties for the killing of wildcats should be immediately discontinued and serious consideration should be given the thought of offering the species some form of protection. An increase in the wildcat population might well aid in the management of the deer by helping to keep the animals more widely scattered and by removing some of the smaller and weaker individuals from the herds.

## 3. On Grey Foxes

Since the payment of bounties apparently has resulted in no noticeable control of the species, it would seem advisable at least to reduce the grey fox bounty to \$2.00, if not to discontinue it entirely because it is a known fact that many of the animals presented in claim for bounty were taken either for the protection of personal property, for sport, or for fur, and would thus be taken regardless of their status under the bounty laws. Furthermore, when the fox population in certain sections becomes too high, possibly the best procedure is to adopt some localized control measure in the territory rather than to attempt to control the species throughout the State.

## 4. On Weasels

As the weasel population of the Commonwealth apparently is not controlled by the bounty system, and since it has been shown both that approximately two-thirds of the bounty costs are expended for the destruction of the species and that the rate of bounty payments has little bearing on the number of animals taken, it appears wise either to reduce the weasel bounty to \$.50 or to discontinue it for a period of years wherein the effects of such action may be carefully studied.

## THE PENNSYLVANIA BOUNTY SYSTEM—from page 3

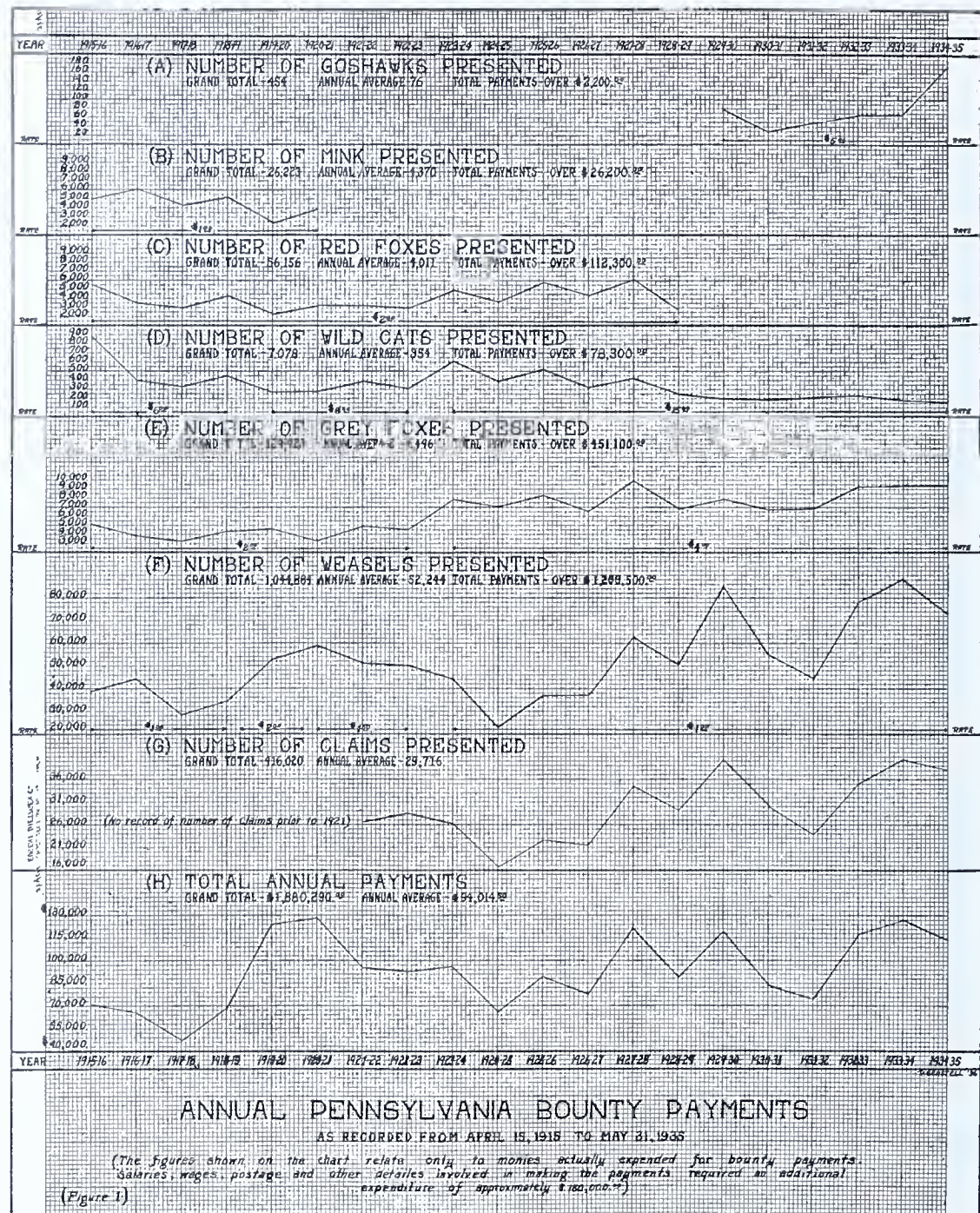


Figure 1

## 5. Other Species

It has been shown that the payment of bounties for the destruction of predators apparently results neither in an efficient control of the species involved nor in any general improvement of game conditions. For that reason alone, therefore, it is not deemed advisable to add any species to the present bounty lists even though certain forms may eventually prove more detrimental to game than any of those now listed for bounty payments.

In view of the points just discussed, it appears that one of the wisest steps toward the solution of the present bounty problem would be to have approved legislative action which would give the Board of Game Commissioners the power to control in every detail the bounty regulations to be enforced within the Commonwealth.

Granted the power just mentioned, an immediate adjustment of the present system could be made to fit current conditions and additional changes could be made as the necessities might arise. Also, by variation of the regulations, the results to be obtained from the payment of bounties might better be observed, while a portion of the monies saved through the correction of the present system could be used to carry out basic research designed to determine the exact need for predator control, the extent to which it should be carried out, and the best methods to be employed in the work.

Editor's Note: The material contained in this and the two preceding articles on the Pennsylvania Bounty System represents a part of the findings incorporated in an illustrated bulletin shortly to be issued by the Commission.





**LEGEND**

- Drivable Road
- Non-Drivable Road
- Township Line
- All Property Line
- Stream
- Spring
- Church
- School
- Swamp

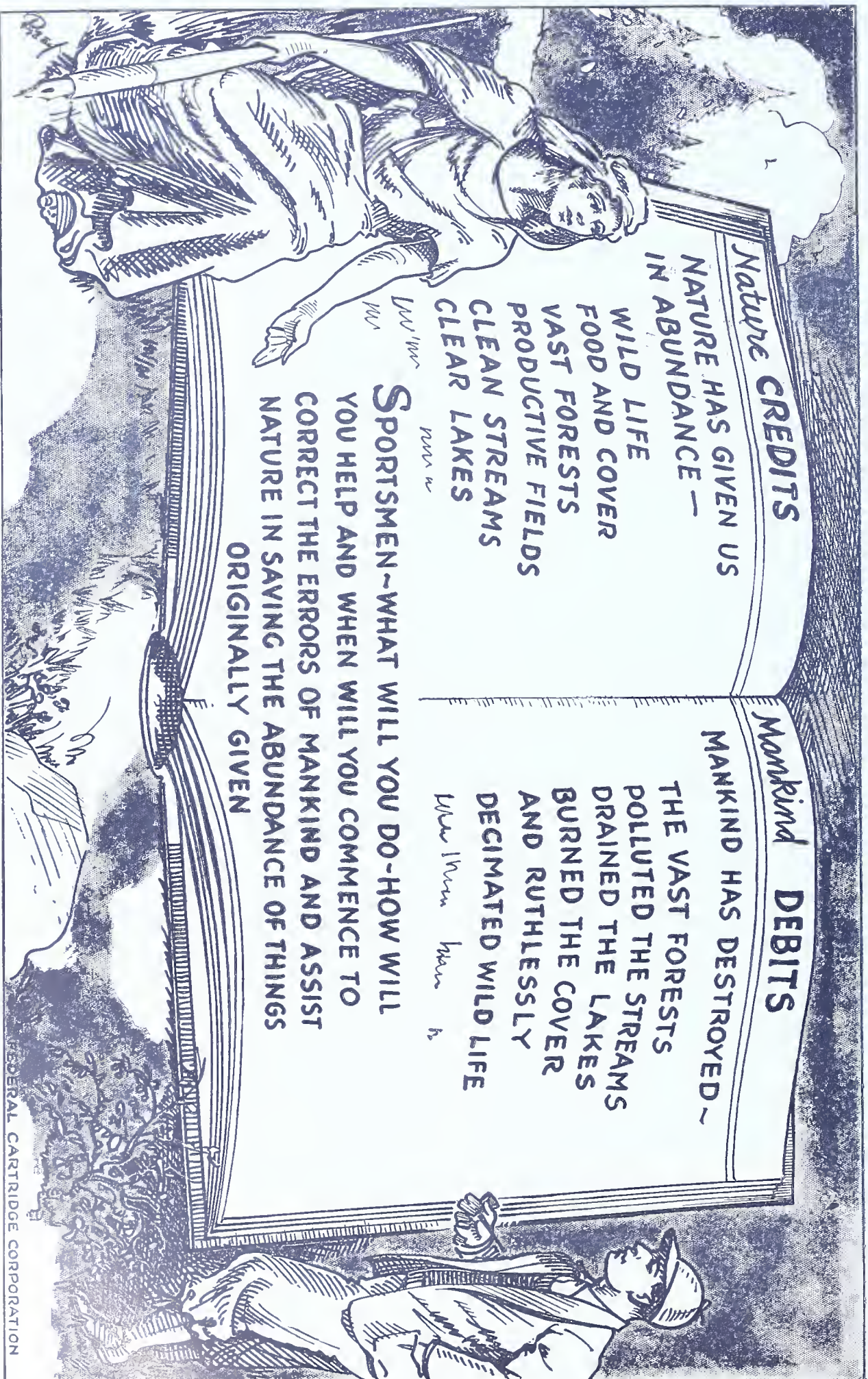
PENNSYLVANIA  
BOARD OF GAME COMMISSIONERS  
BUREAU OF REFUGES & LANDS

**STATE GAME LANDS  
NO. 106.**

**BERKS & SCHUYLKILL COUNTIES**







## Nature CREDITS

NATURE HAS GIVEN US  
IN ABUNDANCE—

WILD LIFE  
FOOD AND COVER  
VAST FORESTS  
PRODUCTIVE FIELDS  
CLEAN STREAMS  
CLEAR LAKES

SPORTSMEN—WHAT WILL YOU DO—HOW WILL  
YOU HELP AND WHEN WILL YOU COMMENCE TO  
CORRECT THE ERRORS OF MANKIND AND ASSIST  
NATURE IN SAVING THE ABUNDANCE OF THINGS  
ORIGINALLY GIVEN

## Mankind DEBITS

MANKIND HAS DESTROYED—

THE VAST FORESTS  
POLLUTED THE STREAMS  
DRAINED THE LAKES  
BURNED THE COVER  
AND RUTHLESSLY  
DECIMATED WILD LIFE



# PENNSYLVANIA GAME NEWS

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# PENNSYLVANIA GAME NEWS

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## THE FARM GAME PROBLEM

**W**HAT does the future hold for sportsmen in the large, intensively cultivated, agricultural regions of this and other states?

This question has given game administrators more headaches during recent years than any other.

In some states well intentioned but hastily conceived plans were put into effect, which later bogged down for lack of experienced administrative man-power.

In others plans were adopted which aroused determined opposition among the sportsmen, because they feared their cherished American system of shooting was on its way out in favor of restricted hunting system in vogue in foreign lands.

And in still others plans were launched which pleased the sportsmen but which in the final analysis did not give the landowners what they sought, neither did they assure better shooting for the sportsmen, a disappointment to both groups.

The Pennsylvania Game Commission has studiously sought to avoid all of these pitfalls, and above all else to safeguard its long-established and nationally recognized policy of public shooting grounds, the crux of the so-called American System.

A special article in this issue of the GAME NEWS by Major W. Gard Conklin explains in detail the Commission's present farm game program, which has been adopted after months of careful study, not only in Pennsylvania but in many other states. Please take time to digest it carefully.

It is sincerely believed that this program, if expanded as rapidly as available funds permit, and given a fair trial over a period of at least ten years, will accomplish just what both the sportsman and the landowner want. But it will get nowhere unless the Commission has the wholehearted, sympathetic cooperation of all concerned.

When this intensive farm game management program really gets underway, and the Commission has under its control upwards of 1,000,000 or more acres of intensively managed public hunting grounds and refuges, the sportsmen who hunt farm game species will be assured of **better hunting every year**, without the necessity for heavy annual restocking in the areas where these cooperative projects are established. And these projects should in a very few years greatly reduce the outside hunting pressure in the mountainous farming regions where these small game projects are not deemed essential.

Mr. Sportsman, if you have the same faith in this new farm game program as does your Game Commission, now is the time to put your shoulder to the wheel. Help to locate and develop suitable areas for these projects now!

## MORE AND MORE RABBITS!

**T**HERE was a pronounced shortage of rabbits in many sections of Pennsylvania last fall. The Game Commission has endeavored to offset this by the heaviest rabbit stocking program in recent years and over 75,000 cottontails were delivered in excellent condition before the middle of January.

Thus, with a total of slightly over \$137,000.00 set aside for the purchase of game and with the State Game Farms wintering a record number of birds including 15,000 cock pheasants and 3,500 quail for Spring release, the 1936-37 game stocking program far exceeds that of the past several years.

But, as stated in the February issue of the GAME NEWS, large rabbit importations from the Middle West are about at an end. How to meet the increasing demand

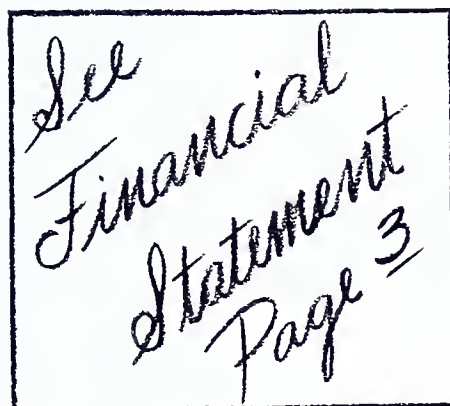
for more and more rabbits for stocking purposes from every organized group of sportsmen in the Commonwealth is the next problem.

However, if you will read in this issue of the GAME NEWS our Mr. Gerstell's first installment of a series of articles analyzing Pennsylvania's experience with imported rabbits, and those in the coming issues, you may arrive at the conclusion that the old axiom, "It's an ill wind that blows nobody good," certainly holds true in the case

of Pennsylvania's attempts to meet the demand for better rabbit hunting.

The Pennsylvania Game Commission has determined to go the limit to meet the demand in a new way. In addition to its farm game refuge program, it is now launching a special system of managed wild rabbit breeding areas, which should likewise increase the number of ring-neck pheasants, quail, and other game. This is a project in which every organized group can play an important part. For your guidance full details will appear in future issues.

Our recent rabbit scarcity is not new, it is simply the acute point in a twenty-year period of decline. It is now up to Pennsylvania to produce her own supply of cottontails which will meet the rigid test of current conditions, including a constantly increasing gun pressure. Pennsylvania has solved other equally difficult game problems, and must and will solve this one. While it will take time and active cooperation on the part of the hunters, your Commission is determined to find a way out. Will you help?





# FIFTEEN MILLION DOLLARS

How the Sportsmen's Dollars Were Spent in Pennsylvania During the Past Seventeen Years

By NICHOLAS BIDDLE

**H**OW would you spend fifteen million dollars to produce better shooting? And would your ideas for spending this tidy sum really benefit all the sportsmen, or only those who like to hunt the same game you enjoy most?

Because of the widespread interest manifested on the part of Pennsylvania's sportsmen as to how their money is being expended, a very timely question, it has been deemed advisable to compile and publish in this issue of the PENNSYLVANIA GAME NEWS a statement showing how the Game Commission has spent this sum during the past seventeen and one-half years.

The statement below shows the total income, total disbursements, the number of employes, and the total amounts spent for salaries and wages, as well as the amounts expended for the six major functions of the Department, by fiscal years, from December 1, 1919 to May 31, 1936.

While this statement has been prepared in such a manner that those not trained in accounting may readily interpret it, there are certain salient points to which we desire to call your attention.

The total expenditures during this period amounted to \$14,788,935.89, of which \$13,347,973.97 were spent for the six major functions as listed, leaving a balance of \$1,440,961.92, less than 10%, for all general administrative salaries and expenses, accounting, printing, postage, research, educational work, deer proof fences, and bear damage claims, a figure that will no doubt surprise the readers of the GAME NEWS as it did me.

## The Past Ten Years

Another matter of interest is the recapitulation of the income and expenditures during the past ten fiscal years; namely, from June 1, 1926 to May 31, 1936, during which time there were \$11,652,147.24 credited to the Game Fund as against expenditures for all purposes of \$10,673,969.53. This amount sub-divided shows expenditures for the six major functions and the percentage thereof in relation to the total spent for all purposes, as follows:

### Major Expenditures Past Ten Fiscal Years

	Amount	Percent
Law Enforcement .....	\$ 3,299,104.61	31.1
Land Purchases .....	1,577,343.00	13.9
Land Management .....	1,848,512.92	17.4
Game Farms .....	765,078.17	7.2
Game Purchases .....	844,996.06	8.2
Bounty Payments .....	1,304,563.27	12.4
<b>Total</b> .....	<b>\$ 9,639,598.03</b>	<b>90.2</b>
Balance for all other purposes .....	1,034,371.50	9.8
	<b>\$10,673,969.53</b>	<b>100.0</b>

## Current Operations

The total number of regular employes, including the Training School at present is 231 as against 194 a year ago, and 150 eleven years ago. The recent increase in personnel was necessary to handle the Commission's new development program adopted early last year and the establishment of the Commission's permanent Training School, where we now maintain 4 employes and 27 Student Officers. The Student Officers will be graduated from the school at the end of February and the entire number will be assigned to existing vacancies in the field force.

Of the balance on hand May 31, 1936, \$246,855.00 was already obligated to cover land purchase contracts and other prior commitments, and a sum of approximately \$350,000.00 was held as an operating reserve to sustain the current operating expenses of the Department from June 1 to October 31, during which time a very small amount of revenue is credited to the Game Fund. After making reservations for these items, the balance was made available

and included in the Budget in the amount of \$1,944,798.75 for the fiscal year beginning June 1, 1936 and ending May 31, 1937. This explains why our budget estimate for expenditures during the current fiscal year is in excess of the estimated income; namely, \$1,186,200.47.

## Game Stocking Increased

This year the Commission set aside \$137,000.00 for the purchase of game in addition to that produced at the game farms, which is far more than expended in any recent previous fiscal year, including the period prior to the establishment of the game farms. The entire amount will be expended if it can be done judiciously.

It now appears that this year will conclude large purchases of rabbits from the Middle West, which means that the Commission must now establish wild breeding areas from which to trap its own rabbits for distribution purposes. It is believed that by spending from \$50,000.00 to \$75,000.00 a year (the amount heretofore expended for imported rabbits) for the development of wild breeding areas, we can produce just as good or even better results, and all of this money will be kept at home instead of being spent elsewhere.

## New Management Program

Game management in Pennsylvania has reached a point where it is now necessary to expend more money from the special fund established by setting aside 75c out of each resident hunter's license fee for improving the environment on the 525,000 acres of game lands already acquired in such a way as to guarantee both ample shooting stock and an annual carry over of seed stock, rather than to depend wholly upon stock produced at the game farms or purchased from other breeders and shippers.

The Commission's new farm game program is covered fully elsewhere in this issue by Major W. Gard, Conklin, Chief of our Bureau of Refuges and Lands. It will take time to develop the program, but sportsmen can easily visualize the vast possibilities in this new undertaking, and the money that can be spent judiciously in farm-game management.

## Game Conservation is a Large Industry

The value of game taken during the period covered by this report exceeds by many, many times the total expenditures by the Game Commission. While this proves without a doubt that conservation pays big dividends to the sportsmen, we must not lose sight of the fact that many other avenues of business are greatly benefited by hunting in Pennsylvania. According to reports on file at this office, \$20,000,000.00 annually would be a very conservative estimate of the amount expended by the hunters for all purposes incident to hunting, which is exclusive of the amount paid for hunting licenses.

## Can the Program Be Expanded?

One question being vigorously discussed among sportsmen these days more than any other is, "Can Pennsylvania's Game Program be further expanded and developed with the present revenue?"

The Commission has always operated well within its income, but its obligations at this time are such that further expansion of the work, or the development of new programs, with the present revenue is out of the question.

While land purchases have been drastically curtailed, the maintenance and development of the lands already purchased is now vitally essential, and it will be observed by reference to Major Conklin's article that almost half of the Commission's current revenue could be judiciously expended on its new Farm Game Program alone.

The sportsmen of Pennsylvania may rest assured that its Commission will spend every dollar entrusted to its care in a business-like manner, but they must not expect impossible things.



# FOR BETTER HUNTING

## COMPARATIVE STATEMENT OF INCOME AND EXPENDITURES DECEMBER 1, 1919 TO MAY 31, 1936

Fiscal Years	Total Income & Expenditures		Salaries and Wages			Total Amounts Expended For Six Major Functions						
	Income	Expenditures	Number Regular Employees	Total Salaries Regular Employees	Total Wages All Classes	Law Enforcement Expenditures	Land Purchase Expenditures	Land (a) Management Expenditures	Game Farm Expenditures	Game Purchase Expenditures	Bounty (b) Expenditures	Totals Six Major Functions
Balance Dec. 1, 1919 (with un-warranted requisitions deducted)	\$ 606,219.12	\$		\$	\$	\$	\$	\$		\$	\$	\$
Dec. 1 to Nov. 30 1919-1920	441,576.10	544,069.46	118	165,309.01	23,612.59	213,819.11	27,859.02	60,661.96		60,430.97	125,156.00	487,927.06
1920-1921	508,554.75	665,351.91	123	179,440.44	28,876.28	261,483.34	76,503.00	81,395.96		78,675.84	124,288.50	622,346.64
Dec. 1 to May 31 1921-1922 (6 mos.)	123,421.83	339,719.64	122	90,012.98	19,449.67	119,317.12	1,000.00	31,580.36		71,147.95	96,664.50	319,709.93
June 1 to May 31 1922-1923	562,115.09	461,272.68	126	179,978.69	20,019.25	181,280.28	10,339.30	61,821.17		33,891.64	93,720.50	381,052.89
1923-1924	673,258.24	624,168.04	135	189,048.62	26,947.69	237,133.98	40,251.13	79,738.47		95,089.84	107,408.70	559,622.12
1924-1925	676,969.51	758,461.69	145	211,221.49	30,318.53	289,480.43	88,343.47	90,467.92		124,860.91	85,961.88	679,114.61
1925-1926	735,665.37	721,922.94	150	231,082.51	34,159.50	300,639.99		126,868.61		117,594.51	113,499.58	658,602.69
1926-1927	731,360.45	648,965.89	150	225,829.44	16,295.39	266,250.95	40,913.10	93,499.74		92,076.79	100,929.94	593,670.52
1927-1928	1,105,736.96	826,484.26	151	242,054.47	23,463.82	288,507.03	39,746.26	138,969.24		118,704.02	149,584.44	735,510.99
1928-1929	1,087,320.83	1,061,791.29	163	259,835.62	61,597.59	318,716.14	171,493.43	185,964.71		118,973.46	113,460.86	1,020,649.10
1929-1930	1,141,138.24	1,132,256.92	163	263,690.12	67,110.48	334,084.56	120,680.53	238,883.70		88,698.83	145,244.24	963,872.79
1930-1931	1,356,082.79	1,250,269.87	169	279,263.11	100,883.79	353,342.86	266,394.32	214,757.03		96,823.50	116,311.33	1,146,530.48
1931-1932	1,311,731.05	1,243,787.14	175	273,787.98	103,929.95	353,240.59	288,008.79	174,732.95		99,250.09	106,486.44	1,105,488.40
1932-1933	1,182,640.19	1,166,675.34	187	297,079.73	151,749.46	373,811.27	167,195.45	219,995.50		80,064.64	148,976.75	1,076,056.05
1933-1934	1,134,664.81	1,187,173.26	190	307,906.15	106,863.27	325,573.42	202,573.37	182,042.00		55,494.03	158,437.63	1,060,004.48
1934-1935	1,235,895.97	1,062,020.76	181	336,431.08	116,435.41	315,816.72	133,677.30	213,137.26		48,275.22	138,494.93	956,556.17
1935-1936	1,365,575.95	1,094,544.80	194	305,551.62	123,006.31	369,761.07	146,660.45	186,530.79		46,635.48	126,636.71	981,259.05
Totals	\$15,979,927.25	\$14,788,935.89		\$4,037,523.06	\$1,054,718.98	\$4,902,258.86	\$1,821,638.92	\$2,381,047.37	\$765,078.17	\$1,426,687.72	\$2,051,262.93	\$13,347,973.97
Balance, Treasury												
Advancement Account, (Bank)												
	\$15,979,927.25	\$15,979,927.25										

**\*Explanation covering balance June 1, 1936: This balance includes:**

Prior Commitments	\$ 246,855.35
Budget Current Fiscal Year	585,068.40
Operating Reserve	316,710.62
Not Allocated	2,356.99
Total	\$1,150,991.36

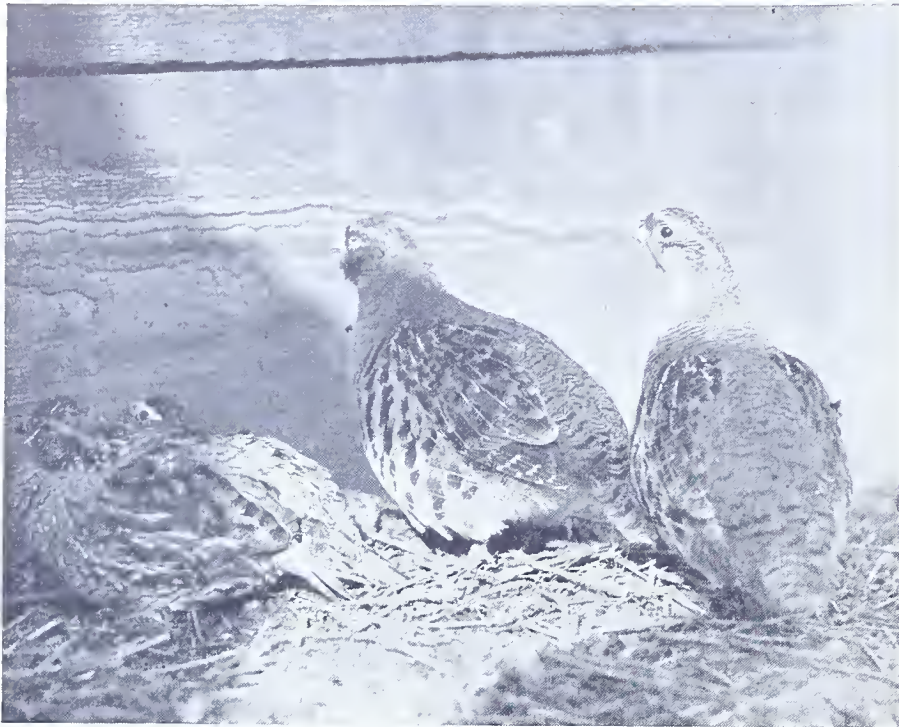
### Estimate of Revenue and Disbursements, June 1, 1936 to May 31, 1937

Balance June 1, 1936  
Treasury Dept. \$1,150,991.36  
(See explanation opposite).  
Advancement (Bank)  
—\$40,000.00  
Budget Estimates 1936-1937—

\$1,186,200.47	\$2,377,191.83	\$1,944,798.75	231	(c)	\$414,555.00	\$144,465.00	\$426,655.00	\$485,179.13	(d)	\$396,685.00	\$143,090.00	\$137,050.00	\$145,800.00	\$1,734,459.13
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- (a) Includes examination of titles and land survey.
- (b) This excludes the advancement account of \$40,000.00 in the yearly expenditures. Therefore, the amounts shown cover only bounties and administrative expenses incident thereto. From December 1, 1919 to May 31, 1922 covers bounties only; from June 1, 1922 to May 31, 1936 includes bounties and administrative expenses incident thereto.
- (c) This includes employees as of January 1, 1937. In this number we have included 27 Student Officers, 4 employees at the Training School and 14 regular full time employees transferred during the year from per diem to salary basis. The expenditures for salaries during the 1935-36 fiscal year were less than normal because a number of positions were left vacant awaiting the time when trained men would be available from the Commission's Training School. Some of these positions were filled temporarily by per diem help, thereby somewhat increasing the normal expenditures for wages.
- (d) A large proportion of this amount is committed for lands under contract for purchase.
- (e) This includes commitments as of June 1, 1936, which accounts for the budget being in excess of the estimated revenue made available for land management.
- SPECIAL NOTE: All the items listed for the 1936-37 fiscal year are budget allocations, and the actual expenditures in many of them will be considerably less.





A Pair of Bobwhite Quail and Hungarian Partridges Showing Comparative Size and Feather Markings.

FOR several years the Pennsylvania Game Commission has been carrying on experiments with the propagation of the European or Gray Partridge on the State Game Farms. This fine game bird, better known as the Hungarian Partridge, is now to be found in a number of counties of the State, though in limited numbers. These birds are the surviving progeny of imported and hand-reared partridges liberated off and on by the Commission during the past ten years.

In an effort to reduce the strain on native game and to provide additional and improved shooting for sportsmen, the Commission recently sponsored a program of increased artificial production of the Hun. Before this plan could be effectively placed in operation many obstacles attending the successful propagation of this bird had to be overcome and an increased knowledge of the bird's reactions, feeding, housing and brooding requirements, was consequently required.

#### Need for Hand-Reared Birds

While there is still much to be learned about the little Gray Flyer, it is generally agreed that native raised, hand-reared Huns are to be preferred for stocking purposes and that this stocking, if it is to prove successful, must be made in adequate numbers. In virgin areas not previously stocked, minimum liberations of from 100 to 150 birds are recommended and in view of this fact the vital necessity for increased numbers of artificially propagated birds becomes obvious.

It is believed that the head-reared Hun is better adapted and prepared from early environment to the country and climate in which he is released and expected to live than his imported brother. The point is also raised that the hand-reared bird is far better prepared because he is raised on native grains and other food which he finds available on Pennsylvania farms and coverts. It is with these points in mind that our propagation methods have been developed and put into operation.

#### Still in Experimental Stage

It should be clearly understood from the outset that artificial propagation of Hungarian Partridges economically, and in any appreciable numbers, is still considered to be very much in the experimental stage, though the Division of Propagation and Game Farms has made considerable progress. Several hundred Huns have been raised on the State Game Farms during the past two seasons and production this year reached the peak of 544.

As so few sportsmen and farmers are familiar with the Hun some general information concerning the bird's reaction in captivity, its habits afield, how it compares and differs with the Bobwhite Quail, and its relationship to other species of native game birds, is herewith presented.

# RAISING HUNGARIAN

By Charles

#### Hungarian Partridge and Bobwhite Quail

Though they do not really resemble each other the Hun has often been mistaken in the field for the Bobwhite. While the two species travel in coveys, are both monogamous, and have other characteristics in common, they are quite unlike in size and appearance. The vast difference between the two birds is quite obvious when seen together, as the accompanying photographs reveal. Approximately twice the size of the quail, the predominating color of the Hungarian Partridge is a soft light gray, compared with the rich brown of the Bobwhite, while the black and yellowish markings of the latter bird are in definite contrast to the reddish brown striping and penciling of the Hun.

#### Breeding and Mating in Captivity

If the propagator is to achieve any measure of immediate success he should begin his operations with hand-reared birds or their eggs. Mating Hungarian Partridges is a difficult and trying procedure for any but the most experienced breeder and the bird is possessed of such a high strung and pugnacious temperament that handling imported "wild 'uns" and attempting to persuade them to mate and lay will prove to be a very difficult task.

#### Sex and Age Identification

The plumage of the male and female Hungarian Partridge is strikingly similar, though the experienced breeder has several ways of determining the sexes.

In adults the head and throat of the male is of a brighter chestnut color than that of the female. The male also displays a dark reddish brown horseshoe marking on the breast. While older hens do not display this marking, the first year hens do and it has been learned that they do not always lose this horseshoe the first year.

Therefore, the only dependable method of sex identification of Hungarian Partridges at all ages is by the markings on the feathers of the lesser wing coverts. On the male the buff stripe runs through the center of these feathers, single and vertical. On the female there will be seen in addition to this vertical stripe several stripes of the same color running crosswise or horizontal. This



Covert Feathers from MALE Hungarian Partridge.



# THE PARTRIDGE

W. Wessell

distinction will be noticed on the accompanying illustrations of wings of both sexes and comparisons of the lesser wing covert feathers.

The legs and feet of young birds are of a yellowish brown color which gradually changes to a bluish gray tint in adult birds. Healthy specimens of matured Hungarian Partridges will weigh between 12½ and 13½ ounces and the average bird will measure approximately one foot in total length.

## Care of Breeders

Breeders should be secured in the late fall and placed together in a good sized wire covered holding field. This field should have clean fresh ground, good vegetation and generous shelter providing the birds a retreat from severe weather. The lean-to type shelter, movable though heavily constructed, is very satisfactory. Corn shocks, evergreen branches and other brush will also make good shelter when placed in rows. It is very important when determining the size of your covered field to allow at least 50 square feet for each bird and preferably more. When breeders are first placed in the holding field there may occur a certain amount of fighting between some of the birds, but this will gradually cease as the weather becomes cooler. Hungarian Partridges are monogamous and although the male will assume an aggressive upright bearing as the breeding season arrives, the female usually does the choosing.

We have found that in captivity the mating season generally gets under way during February. As the first warm days of early spring approach some of the birds will leave the main flock and endeavor to go off together in pairs. Mating pens or traps are prepared at this time, as they will soon be required for catching up the pairs.

## Habits in the Field

It has been learned that the "Huns" will start mating in the coverts in late winter, just as they do in captivity. Weather conditions seem to make very little difference. The birds will begin calling, and at the very first approach of spring the males will start to engage in brief, but often vicious battles.

## Nesting

Hungarian Partridges nest on the ground and seem to prefer



Covert Feathers from Female.



Wings of Male and Female Hungarian Partridge. Note Single, Vertical White Line Running Through Feathers of Lesser Wing Coverts of Male on the Left. Wing of Female (on Right) Shows Horizontal Stripling Running Crosswise to Vertical, Center Line on Same Feathers.

grain fields and fence rows when selecting a site. This is usually done in the early part of May. Nests will be found where there is stubble, dead grass and weeds and often along the borders of the fields. Fence rows and roadsides are favored by the birds, but the extensive burning and trimming operations in connection with "clean" farming have made these favored nesting places all too scarce.

## Eggs

The Hun lays an egg of varying brown, blue or olive drab tint. Competent observers report an average of 15 eggs per nest, though clutches laid late in the season usually contain a lesser number.

The incubation period is twenty-four days and in the wild state, unlike the Bobwhite Quail, the female does all the setting. On the other hand, the male Partridge becomes the same dutiful father as the Bobwhite, cooperating with the female's serious business of rearing the flock.

## Habits Similar to Quail

Activities of Hungarian Partridges afield are similar to the Bobwhite quail in many ways.

Both roost on the ground in a circle, rise suddenly when flushed, and nearly always simultaneously. While neither bird will fly for any great distance, the Hun covey will usually carry farther than the Bobwhite and has a longer cruising range.

While the Hungarian is more of a vegetarian than the Bobwhite, both will include grain, weed seeds and a certain amount of fruits and insects in their diet, and farmers will be pleased to learn that a large percentage of these insects are of a type injurious to crops.

Neither the Hun nor the Bobwhite are dependent upon well watered areas for drinking water, as the requirements of both can be met by dew, succulent green food and insects.

Availability of stubble fields, waste grain, ragweed and a few rows of corn left on the stalk will help to feed and preserve your Huns through the winter and encourage them to remain in the same territory.

Hungarians are somewhat hardier than quail and are very resourceful when food is scarce. They are rugged little fellows, well able to rip open the husks on ears of shocked or standing corn.

It has been pretty definitely ascertained that Partridges will not attack or "drive out" Bobwhite quail or attempt to molest other species of game birds. His pugnacity and relish for fighting seems to be confined within the limits of his own family circle.

With continued and increased propagation activities, sound restocking and game management, together with sportsmen's and farmers' cooperation in protecting the birds and improving natural food and cover conditions, the Hungarian Partridge should soon be well on his way toward becoming a permanent member of Pennsylvania's game bird family.





Sportsman and Game Protector lifting crate of rabbits from car.

### Introduction

**D**URING recent years conservation officials and other interested persons in many of the more thickly populated Eastern States have constantly stressed the fact that the vast majority of the gunners within those districts are primarily rabbit hunters. In spite of the importance of this point, however, there has, relatively speaking, been extremely little attention paid to the rabbit problem by those entrusted with the conservation and management of the game resources of the various states.

It is true that some of the Middle Atlantic States have for a number of years carried on restocking programs and experimented in the artificial propagation of the species, while other state and federal agencies have recently undertaken detailed studies of the various phases of the rabbit question, but even this work does not represent the attention rightfully due the problem and since the glaringly apparent scarcity of cottontail rabbits throughout the Northeastern United States during the fall of 1936 has brought the rabbit situation into the focal point of eastern game managers' attention, it is only right that the rabbit policies of the past be fully investigated and reported to aid in the crystallization of sound plans for the future.

### Pennsylvania's Status

Pennsylvania is today probably no better or worse off in regard to the rabbit situation than are her various neighbor states, with the possible exception that she has behind her over forty years of constant game policy wherein it is possible to look back and study some of the effects of cottontail rabbit management as practically applied over a long period of years. Taking advantage of this fact, the writer will attempt to show herein some of the results of past principles and based chiefly upon them, to offer certain suggestions as to the plans for the future.

### The Native Cottontail

In the first place, the fact must be admitted that there is some doubt as to that subspecies of cottontail originally native to Pennsylvania. Taxonomic authorities are not entirely in agreement concerning this matter and the constant introduction of live rabbits from the South and Middle West has now brought about conditions whereunder many of the rabbits found within the State may possibly be hybrid individuals arising from crossings of two or more subspecies.

### Subspecific Characteristics

The importance of the point just mentioned may not be fully realized unless the reader is familiar with certain facts recently brought to light by various wildlife investigators. Leopold in 1931 first called attention to the fact that there apparently is for cottontail rabbits in the Middle West a certain so-called "holing-up

# MANAGEMENT of RABBIT in



Removing rabbit from crate.

zone." In this zone, including roughly all of Minnesota and Wisconsin, together with the northern halves of Ohio, Indiana and Illinois, as compared to the States of Iowa and Missouri and Southern Ohio, Indiana and Illinois, it has been found that in the daylight hours the rabbits tend to remain in their holes during periods of severe cold, while outside the zone the same tendency is not exhibited. For example, it was found that cottontail rabbits in South Dakota and Northwestern Iowa "bedded out" in temperatures of minus ten degrees Fahrenheit, while plus ten degrees Fahrenheit caused them to "hole up" in Wisconsin. Is it possible that through the constant introduction of rabbits from Kansas and Missouri there is a tendency to build up a race of rabbits which are less inclined to "hole up" than those rabbits indigenous to the State? This we do not know and only detailed research work will throw more light on the problem.

Possibly the importance of the "holing-up" tendency may still seem relatively unimportant and if so, the reader should stop to consider a moment what advantages a hole offers in the way of protection from extreme temperatures, both hot and cold; how with full knowledge of the "holing-up" habit, the gunning season might be so placed seasonably as to regulate the annual kill; and other factors.

### Sex-Controlled Habits

Due to casual observations and discussions, the writer is inclined to believe that during the fall and early winter months in Pennsylvania, it is entirely possible that the great majority of rabbits found in their "forms" during the daylight hours are the males of



# the COTTONTAIL PENNSYLVANIA

*by Richard Gerstell*



Released.



The author and Game Protector sexing rabbit.

the species and that the vast percentage of the females remain "holed-up" under the same conditions, emerging from the dens to "play" and forage only after dark. Unfortunately, the occasion to investigate fully this problem has never presented itself, but in November 1935, it was found that of 878 cottontail rabbits shot by gunners on three consecutive days, 694 individuals were males, while 184 were females, the relative percentages of the sexes being roughly 79% and 21% respectively. On the other hand, when engaged in the live-trapping and redistribution of rabbits with the aid of a ferret, numerous cases proved of interest. In one instance, "ferreting" one hole netted a total of nine rabbits, seven females and two males. Similarly, another hole produced five females and two males. Such figures cannot, of course, be taken as definite proofs, but they do give some indication of the facts as they may exist and at the same time they clearly indicate the crying need for basic research in the rabbit problem.

## Normal Sex Ratios

The suggested possibility that the different sexes of rabbits exhibit dissimilar habits gives rise to the question of the normal sex ratio in wild rabbits. In this case, larger and hence more reliable figures are available, though once again they may not be conclusive. During the winter of 1934, the writer personally sexed during an eleven day period a total of 6,394 live cottontail rabbits shipped into Pennsylvania from Kansas and Missouri for restocking purposes. These animals had been caught in box traps and shipped "run of the mill," irrespective of sex. Assuming that both the males and females travel at night in search of food and in

"play," and hence should stand relatively the same chance of being trapped, it is interesting to note that of the total in question 3,246 individuals were females, while 3,148 were males, the respective percentages being 50.8% and 49.2%.

Again in this case we are forced to wonder about the effects of past restocking programs. Supposing that the majority of the rabbits shot each year are males, would it not be better to stock more males than females, rather than proceed as in the past to plant approximately 50% males and 50% females? This, too, is a question which only detailed investigations will answer.

## Inauguration of the Restocking Program

At this point it may be well to consider fully the restocking program carried out in Pennsylvania during the past two decades. A careful study of the Game Commission records revealed the fact that in 1915 the State's first official rabbit planting activities were undertaken. In that year, box-trapped rabbits were purchased in the then lightly hunted counties in the northeastern and northwestern sections of the Commonwealth and later released in the more heavily hunted areas surrounding the cities of Philadelphia and Pittsburgh. The exact number of animals so stocked is not known, but the total was only several hundred.

Realizing that the sportsmen of certain sections of the State would not long tolerate the removal of rabbits from their home districts for release at other points, the Commission inaugurated a program of purchase from other states in the year 1916. In that year 2,668 rabbits were obtained from Kentucky and Virginia and since that date purchases of the same type have been made annually from the Middle West on a much larger scale.

## Source of Supply

As soon as it was decided that cottontails should be imported, the question as to the most desirable source of supply immediately arose. Seeking the nearest point where suitable animals could legally be obtained in large numbers, that area embraced by Missouri and Southern Kansas was finally chosen as the supply point. It was felt that from there a subspecies of rabbit most closely resembling the native Pennsylvania cottontail could be legally obtained in the numbers desired without prohibitive shipping costs or mortality. This belief proved entirely correct with the result that well over 90% of the rabbits stocked by the Pennsylvania Game Commission have come from the two states in question, while Vermont, Illinois and Tennessee have furnished a few thousand specimens.

## Method of Capture and Shipment

The Commission has maintained a constant policy of purchasing only box-trapped animals, believing that driven rabbits are in a relatively large percentage of cases so injured at the time of capture that death results several days later if not during the act.

(Continued on Page 27)



# AN ANALYSIS OF THE



"Safety First"

**S**PORTSMEN, farmers and the public generally are displaying unusual interest in the Game Commission's Farm Game Program, and want to know more about it. Most of the details of the program have been explained from time to time in articles in the GAME NEWS, letters to our Field Force, and in the public press. The purpose of this analysis is to mention briefly in composite form the important phases of the program, and then explain more in detail that portion of the program dealing with the creation of farm game refuges with their surrounding open shooting grounds in the more thickly populated agricultural counties of the State.

## The Farm Game Problem

The Game Commission has for years been confronted with a difficult problem in attempting to provide better hunting conditions in the more densely populated and intensively tilled counties. The problem is due largely to four principal factors:

1. A large majority of licensed hunters want an adequate supply of small game, the species living on farms, within easy reach of their homes.
2. They want ample acreage on which to hunt, which happens to be privately-owned farms, all too large a proportion of which are posted against trespass. Quite a different condition of affairs exists for the hunting of forest game species, since in this State more than two and one-half million acres of forest lands are in public ownership, and where, taking the State as a whole, only a comparatively small proportion of forest lands are posted against trespass.
3. The farm owner, although he may enjoy seeing game and beneficial wild birds on his farm, and may do some hunting, is not particularly interested in having any great quantity of game on his farm, and takes little or no interest in providing a better environment for it.
4. The long-standing conflict between the hunter and the farmer, due largely to the fact that all too many hunters disregard the farmers' rights and wishes, resulting in increased posting of farm lands against trespass.

## The Farm Game Program

To solve the problem, insofar as possible, the Game Commission last year adopted a far-reaching program of activities, in addition to its previous game stocking activities, and only recently somewhat expanded this program. The major phases of the program, briefly stated, are:

1. Continue the production or purchase and stocking of cottontail rabbits and ringnecked pheasants, and such other game animals and birds as the Commission is able to liberate from time to time on areas either open to public hunting or entirely closed, even to friends of the owner. This phase of the program is handled by the Division of Propagation and Game Farms and the Division of Game Research and Distribution.

By W. GARD CONKLIN

2. Endeavor to open up to public hunting as much farm acreage as possible.
3. Make special efforts to provide adequate protection for farmers and farm property.
4. Conduct a strenuous campaign to create a better bond of fellowship between hunters and farmers.
5. Create and maintain on a sustained basis as large a crop of game as farms can economically support by:
  - (a) Establishing numerous small-sized wildlife refuges.
  - (b) Improving to the maximum wildlife habitats on lands owned or controlled by the Game Commission, and endeavor to show farmers and sportsmen how this may be accomplished elsewhere.
6. Set up four controlled shooting areas as "laboratory tests", where the kill of game is controlled by issuing permits to a limited number of hunters. This phase of the program is handled by the Division of Game Research and Distribution.

## Conducting the Farm Game Program

A large part of the program has been placed in the lap of the Bureau of Refuges and Lands, but all other bureaus and divisions, as well as the field force, enter the picture in one way or another. If the program is to attain all, or even a major part of its objectives, every function and every employe of the Commission must lend a hand.

The aid of sportsmen, individually and as organizations, is earnestly solicited. Sportsmen should be impressed with the necessity of giving their active and whole-hearted cooperation and aid to the program if they want to further their own interests. The Commission certainly does not have at its command all the resources required to provide sportsmen with all they want, that is, a larger supply of farm game species and ample open acreage upon which to hunt.

## Farm Game Refuge Projects

That portion of the program dealing with the creation of numerous small-sized refuges with surrounding open shooting grounds in the more thickly populated agricultural counties, their management to improve wildlife habitats, and farm protection, is largely coordinated in what is now termed "Farm Game Refuge Projects."

**Authority for Creating Such Projects:** Farm Game Refuge Projects are created under provisions of law for the establishment of Auxiliary State Game Refuges, and are merely a sub-classification of Auxiliaries. Certain of the provisions of this law are cumbersome and non-essential, but it is hoped that the present Legislature will greatly simplify them. The Commission recently adopted a separate set of Rules and Regulations to apply to Farm Game Refuge Projects.

**Projects Applicable to Twenty-one Counties:** Farm Game Refuge Projects may now be set up in twenty-one counties comprising the southeastern and southwestern sections of the State. Prior to the January 1937 meeting of the Board the plan was applicable only to eight counties. The southeastern section includes the territory east of the Susquehanna River and south of the Blue Mountain Range, which comprises the counties of Northampton, Lehigh, Berks, Lancaster, Lebanon, the southern half of Dauphin, Chester, Montgomery, Bucks and Delaware. Then in the southwestern section of the State the plan is applicable to the counties of Lawrence, Armstrong, Indiana, Westmoreland, Fayette, Greene, Butler, Beaver, Washington and Allegheny.

**Projects to Contain Not Less Than 300 Acres:** Each project must contain at least 300 acres as a nucleus, which usually means securing the hunting rights on a group of two to four contiguous farms



# FARM GAME PROGRAM

## Farm Game Refuge Projects Explained.

to get a project started. Heretofore, efforts were made to secure the hunting rights for several thousand acres, but this was found too difficult. The reduction to 300 acres authorized by the Board January 7, 1937 will, it is thought, make it much easier to launch the program because when a project is started adjacent farmers quickly see the value of it and offer their lands to the Commission.

**Agreements with Farm Owners:** Only the hunting rights for the various farms are, by written agreements, vested in the Game Commission for a period of ten years or more. The farmers' ordinary activities are in no way interfered with. The ten-year agreements have been objectionable to some farm owners, but as this is a requirement of law the Commission cannot legally execute an agreement for a shorter period. However, the Commission is now endeavoring to have the law changed to permit reducing the period to a minimum of five years.

These agreements may be cancelled by the Executive Secretary of the Commission on sixty-days' notice. The farm owner does not have a similar right, which again is a restriction of law. However, the Commission has gone on record that agreements will be cancelled should the landowner so desire, and produce a reasonable excuse. During the period of seventeen years in which Auxiliary Refuges have been created there has not been a single instance where the Commission refused to cancel such agreements when so requested.

**Establishment of Refuges:** After the agreements are fully executed, a number of small breeding and retreat areas, ranging in size from a very few acres up to fifty, are selected jointly by the farmers and the Commission, and posted against hunting. The best available game habitats on the farms are selected for this purpose, which are almost invariably spots seldom, if ever, used either for cultivation or pasture, such as thickets, brush, woodlots, etc.

Each of these small retreat areas is termed a refuge subdivision, and all of the subdivisions within one project are considered to be one game refuge. The auxiliary refuge law provides that no such refuge may be established within two miles of another refuge. Small farm game retreats must, of necessity, be much closer together than that, so the Commission decided the small retreats combined on a project should comprise one refuge. An effort is now being made to remove from the law this useless two-mile limitation.

Around each subdivision, if not already surrounded by a fence or other well-defined line, is strung a single strand of wire. The boundary is also conspicuously posted with red metal signs bearing in white letters the words "Auxiliary State Game Refuge—Hunting is Unlawful". No hunting whatever is permitted within game refuges as they are intended to provide a place where game animals and birds may seek safety when hunted. Breeding stock is practically assured for future game propagation regardless of the number of hunters on an area.

**Safety Zones Provide Farm Protection:** Safety zones surround farm buildings, with notices conspicuously posted warning hunters that the discharge of firearms within 150 yards of buildings is illegal. These zones provide much-needed protection for the farmer, his property, and his livestock, and since the Commission's officers are required to enforce the provisions of the Safety Zone Act within Farm Game Refuge Projects, the farmer is doubly protected. The Board at its meeting January 7, 1937, agreed to limit the use of its Safety Zone posters to Farm Game Refuge Projects only.



Typical Farm-Game Country.

**Better Game Habitats to be Developed:** The supply of game depends largely on the quantity, suitability, and proper distribution of winter foods, as well as on cover under which to find safety from predatory species. It is a well-established fact that one of the principal causes of game scarcity in the better agricultural sections is the lack of proper environmental conditions. Fence rows are kept too clean of shrubs, vines and weeds necessary to game's existence, and too many spots where the soil is poor are cultivated or overgrazed, although it is questionable whether such use is economically profitable.

Where there is ample food and cover, suitable game species can be expected to prosper. The Commission's plan is to develop better environmental conditions within and near refuge subdivisions wherever the respective farmers are willing to have this done. Certain food producing shrubs and vines are to be planted or transplanted from thickets to spots where the supply is too limited. Small strips of the none too good soil can be sowed to certain desirable grains in, or bordering, the refuge subdivisions. Eroding fields or ravines can be planted with soil conserving vines, shrubs, seedling trees, or other plants which develop good root systems and which will provide food and cover for game. Such planting will not only provide a better habitat for game, but will, likewise, be valuable to the farmer by checking or preventing soil erosion.

**Hunting:** All those portions of the farms not included within safety zones or refuge subdivisions remain open to public hunting. This amounts to approximately two-thirds of the area included within a project. No special permit is required to hunt, although it is distinctly a wise thing for hunters always to contact a farmer and discuss hunting possibilities with him. Hunting is permissible through the courtesy of the farmer, and his good will is a decidedly valuable asset to secure.

Educational signs are posted throughout the area calling hunters' attention to the fact that they are, in reality, guests of the farmer, that hunting is enjoyed through his courtesy, and that his rights and wishes should be respected. These signs also warn hunters that it is unlawful to leave gates open or bars down, or to break down fences, or to injure poultry or other livestock.

**Patrolling by Game Commission Employees:** Largely as a protection to the farmer and his property, the Commission provides a certain amount of patrolling, usually by Deputy Game Protectors, during the open hunting season. A clause to this effect is incorporated in every agreement temporarily vesting the hunting rights in the Commission.

**Forms of Remuneration for the Farmer:** Cooperating farmers and their families are urged to raise certain game birds from eggs which the Commission will furnish, and for which they will be paid a reasonable price. Likewise, a farmer will be paid for trapping surplus game from his farm when and if the Game Commission decides there is a surplus. Another form of compensation for the farmer is that the Commission will pay him a reasonable



price for planting certain game foods, or for shocks of corn or other grain which should be left standing in the field over winter to provide food and cover for game. Likewise, the Commission will employ the farmer, wherever possible, to perform necessary work in connection with the management and development of the project.

### THE NEED FOR AN INTENSIVE FARM GAME PROGRAM

One of the reasons why the Commission formulated its Farm Game Program is that sportsmen of Pennsylvania have for years been clamoring for an intensive game restoration program in the closely tilled regions of the State. Efforts to buy State Game Lands in the southeastern and southwestern sections have met with very little success due to certain economic conditions, such as the price limitation in the law, and the big question as to whether a price higher than \$10 per acre was justified for lands to be used merely for game purposes. It is also a fact that suitable compact blocks of desirable **open lands** of sufficient size to make them worthwhile were not available. A very few blocks of **woodland** have been purchased in those sections, but the total acreage is so small as to make it almost negligible, considering the large number of licensed hunters in those counties.

The Commission has annually stocked those sections with liberal quantities of ringnecked pheasants and cottontail rabbits, and in former years with bobwhite quail. This stocking has been restricted to lands open to public shooting, or to game refuge areas. It was found, however, that restocking alone did not produce the results desired, either by the Commission or by the army of small game hunters, since few of the landowners had any direct interest in improving the habitat for game so stocked. It is evident that unless game is provided with proper food, and with cover under which to find protection from its natural enemies, the stocking of game will not meet with complete success. Another point to which attention is called is that **landowners are unable to set aside and maintain effective refuge areas without the support of the Commonwealth.** In an effort to find a solution to these several vexing problems, and especially to encourage groups of landowners to cooperate with the Commission and organized sportsmen, the Commission adopted the plan above outlined.

### THE FIRST FARM GAME REFUGE PROJECT A SUCCESS

Only one Farm Game Refuge Project was completed prior to the hunting season last fall. The result convinced the Commission that the plan is sound in every respect. The success of that one project indicates that it is a decided step forward toward solving the farm game problem. It is based as nearly as possible on the principle of free shooting, so dear to the hearts of American sportsmen; and on good sportsmanship on the part of hunters, a matter of vital importance to farmers. **There is no greater enemy to the sport of farm game hunting than the hunter who commits acts of vandalism on farms, or who fails to show the farmer due courtesy at all times.**

*Farmers Satisfied:* This one project proved satisfactory to farmers and sportsmen alike. The eleven farmers owning or cultivating the 1,507 acres contained in it were entirely satisfied, since not a single act of vandalism or discourtesy to them occurred. No hunter attempted to shoot at game within any of the various safety zones surrounding buildings, nor was there a single instance of property or farm livestock damage.

*Sportsmen Satisfied:* Sportsmen were pleased because they were assured the right to hunt on a large area, most of which had heretofore been posted against trespass, and because they were privileged to do so without encountering annoying restrictions, such as the necessity of first securing a permit for a few hours' or a day's hunt. Hunters apparently fully realized that the twelve small refuge subdivisions, totaling only 205 acres, would prevent an over-kill of game, thus safeguarding breeding stock for the future.

*Sportsmen's Aid Essential:* The success of Farm Game Refuge

Projects is to a great extent dependent on the cooperation and active aid of local sportsmen, so the Commission has agreed to establish them primarily in sections where local sportsmen's organizations evidence their interest by agreeing to actively aid in securing suitable areas and making environmental improvements for wildlife.

### SPECIAL RULES AND REGULATIONS ADOPTED

The Board at its meeting January 7, 1937, adopted the following set of Rules and Regulations to apply to "Farm Game Refuge Projects":

- (a) Hunters shall at all times respect the rights and privileges of cooperating farmers, and shall not damage or destroy property in any manner.
- (b) If the cooperating farmer or person in legal control of the farm elects to collect damages for destruction or damage to property or livestock, no penalty for violation of (a) above shall be imposed under these regulations.
- (c) Trees or shrubs shall not be mutilated or cut, nor shall berries, fruits or nuts be picked on or within a farm for which the Game Commission controls the hunting rights, except by permission of the owner or person in legal control of such property.
- (d) Special rights and privileges, including the trapping of fur-bearing animals, may be granted to cooperating farmers, members of their immediate families, or their employes, when conditions justify granting such rights and privileges.
- (e) Hunters shall use every possible precaution to prevent dogs from entering refuge units. Should a dog inadvertently enter a refuge it may be recovered by the hunter entering the refuge without firearms or bow and arrow.
- (f) Should a seriously crippled bird or animal enter a refuge unit, the hunter who crippled it, if he wishes to retrieve it, shall report to a duly commissioned officer of the Game Commission or the farmer on whose land the refuge unit is located, and such officer or farmer may investigate, accompanied by the hunter without firearms or bow and arrow, and if said bird or animal is found to be seriously crippled it may be secured by the officer or farmer and turned over to the hunter.
- (g) Springs and streams must not be contaminated in any manner.
- (h) Mutilation, destruction or removal of signs and posters of the Game Commission is prohibited.

### WHY FARM GAME REFUGE PROJECTS ARE NOT STATE-WIDE

A question frequently asked is why the Commission limits the establishment of Farm Game Refuge Projects to only twenty-one of the sixty-seven counties of the State. The answer is easy. Funds are not available to permit extending the plan to farm territory throughout the State, and consequently it has been limited to those counties where the greatest need is evident. The Board's decision may be further explained by citing a few statistical facts.

*Farm Acreage:* Pennsylvania's farms, including woodlots, total 15,855,343 acres, and it is estimated there are about 400,000 hunters primarily interested in small game. This indicates 34.6 farm acres per hunter.

35% of the State's farm acreage, or about five and one-half million acres, is contained within the twenty-one counties in which Farm Game Refuge Projects will be established. In this connection, attention is called to the fact that in these counties is found the greatest number of farms posted against trespass.

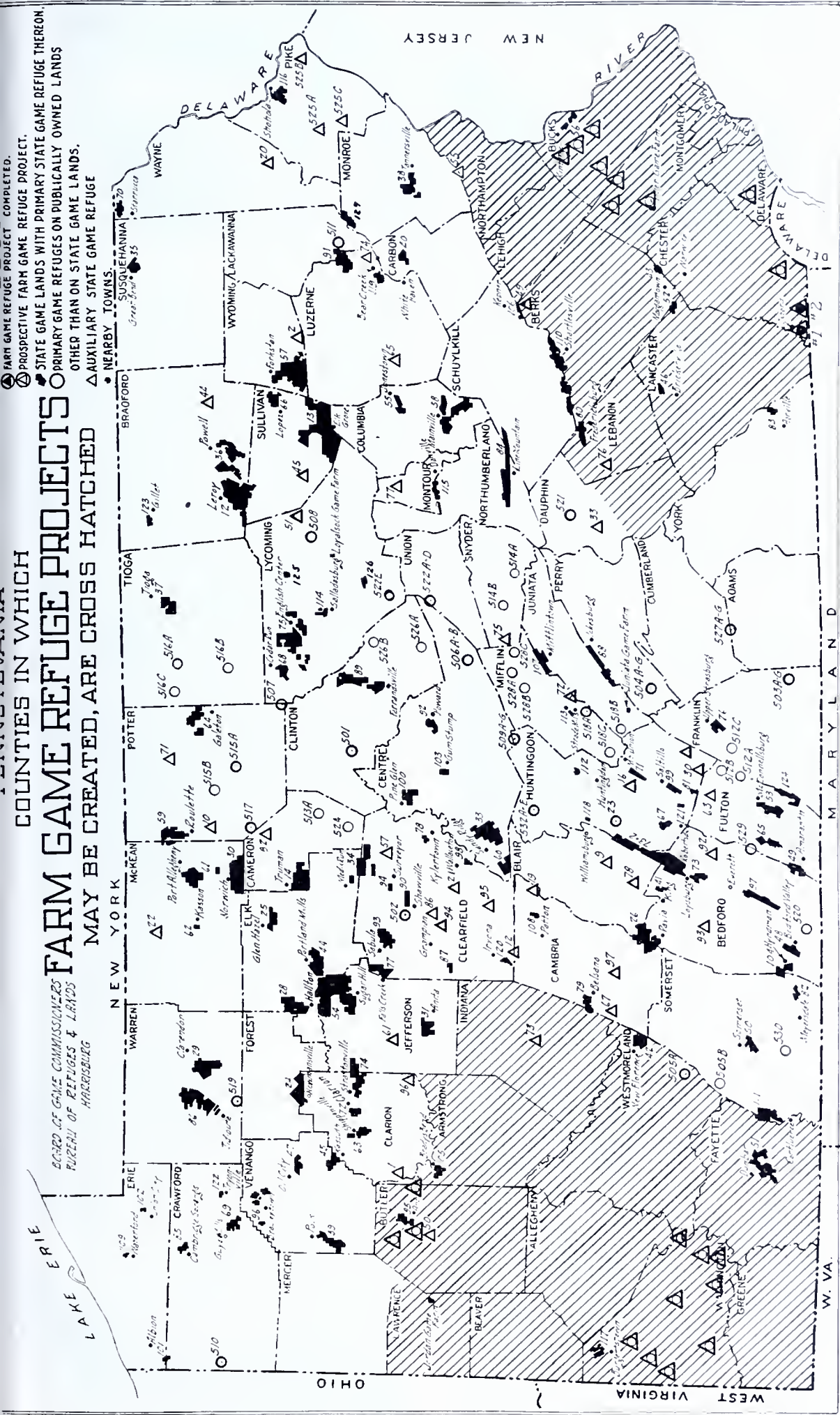
*Large Proportion of Hunters in These Counties:* 46% of the 530,660 resident hunting licenses issued in 1936 were taken out in these twenty-one counties. Some of the licenses were, of course, issued to persons mainly interested in hunting forest game species in

(Continued on Page 31)



Talking it over.





STATISTICS FOR COUNTIES WHERE FARM GAME REFUGE PROJECTS ARE APPLICABLE

SOUTHWEST CORNER OF STATE						SOUTHEAST CORNER OF STATE					
County	Number of Farms	Farm Acreage	Average Acreage Per Farm	Population 1930 Census	Hunting Licenses Issued 1936*	County	Number of Farms	Farm Acreage	Average Acreage Per Farm	Population 1930 Census	Hunting Licenses Issued 1936*
Lawrence	2,655	180,478	68.0	97,258	6,848	Dauphin**	2,640**	188,876**	71.5**	165,231**	10,730**
Butler	4,186	320,480	76.6	80,480	8,170	Lebanon	2,268	157,440	69.4	67,103	5,192
Beaver	2,354	179,959	76.4	149,062	7,947	Berks	6,002	400,857	66.8	231,717	16,657
Allegheny	3,594	190,447	53.0	1,374,410	35,567	Lehigh	2,861	167,656	58.6	172,893	9,128
Washington	5,072	470,422	92.7	204,802	9,395	Northampton	2,775	160,523	57.8	169,304	11,883
Greene	3,170	327,102	106.3	41,767	2,131	Bucks	5,070	283,463	55.9	96,727	8,242
Armstrong	3,351	278,349	83.1	79,298	7,427	Montgomery	3,846	184,390	48.1	265,804	17,207
Indiana	3,842	346,163	90.1	75,395	8,612	Chester	4,936	389,311	78.9	126,629	7,865
Westmoreland	5,368	406,573	75.7	294,995	23,084	Lancaster	8,863	519,282	58.6	196,882	15,853
Fayette	3,954	271,148	68.6	198,542	11,170	Delaware	995	55,837	56.1	280,264	5,861
Total	37,546	2,981,121	79.0	2,596,009	121,351	Philadelphia	286	13,899	48.6	1,950,961	14,514
Percentage of State	20%	18%		26%	23%		40,542	2,521,534	62.2	3,723,515	123,062
Grand Total	78,088	5,502,655	70.5	6,319,524	244,412		21%	17%		39%	23%
Percentage	41%	35%		65%	46%						

REMARKS: Total State population in 1930 was 9,631,350.  
Total number of farms in the State is 191,284, comprising 15,855,343 acres.  
Resident Hunting Licenses issued to January 20, 1937 was 530,660.  
One out of 18 persons in the State took out a Hunting License in 1936.  
One out of 26 persons in the 21 counties above, took out a License in 1936.

\*The 1936 Hunting License issue is not complete. Final figures will not be available until September 1, 1937.  
\*\*These figures cover entire county whereas Farm Game Refuge Projects are applicable only to about half the county.





Remise system.

**EDITOR'S NOTE:** Here is an article in which farm practice and game management are dovetailed in much the same manner as the farm-game program which the Game Commission carried on so successfully on a few experimental areas last fall, and which will be extended as rapidly as funds permit.

THE American outdoorsman, hearing tall tales of abundant game in Germany, is likely to form a mental picture of a whole country hopping with furred and feathered wildlife. Such is by no means the case. In Germany, as in America, one finds farming regions which are gameless, and others which have abundant game of many species.

Why? The difference lies mainly, I think, in the local people. Some localities are willing to work for their sport, and have plenty. Others are willing merely to take what comes easy, and have little or none. In no case does government raise game for the shiftless community. Game officials have learned, through long experience, that the only thing they can do to improve shooting is to help those who help themselves.

While abundance thus depends primarily on local effort, there is a general trend for effort to reap greater rewards as one moves inland. This is because the soils grow better inland. The same is true with us.

While there are gameless farm regions, there are no gameless forests. The sportsmanship of German foresters is traditional—they managed game long before they managed timber; hence game management is universal in both public and private forests. At the present time, however, forest game is in a bad way. The carrying capacity of the range has declined due to planting too many pure-conifer stands, which afford an excess of cover but no food.

A heavy population of deer is carried by means of artificial feeding, but without na-

\*This paper is based on studies made in Germany and Czecho-Slovakia, August to November, 1935, under the auspices of the Oberlaender Trust and Carl Schurz Memorial Foundation. For help in gathering the data I am especially indebted to Gaujagermeister Freiherr von Riebnitz, Kreisjagermeister Quaschnig, and Landwirt Alfred L. Schottlaender, of Breslau; Forstmeister Wilhelm Blume of Heinrichau, Graf von Rotkirch und Panthen of Massel, Graf Carl Dietrich von Haldenberg of Rettgau, Dr. Sparg of Puschkowa, Silesia; also Prince Carl von Hohenlohe-Langenburg of Domane Rothenhaus, Gorkau, Czecho-Slovakia.

# Farm Game in

tural foods the deer herd has declined in quality and vigor. The German foresters now wish to restore a natural mixture of hardwoods, but the deer won't let them—hardwoods must be fenced to survive the hungry animals. The deer pressure also tends to destroy the berries and mast which are the food supply of grouse.

The reason for gameless farms is the same as with us: intensive agriculture, where conducted without regard for wildlife, has destroyed the cover and food. A few hares and Hungarian partridges may persist on such unmanaged areas. They are leased and hunted for what little shooting they afford,



Clipped spruce backed by tall spruce on edge of a remise.

but as with us, the crop is thin and uncertain, being determined wholly by accidental combinations of weather, gunpowder, and agricultural practice.

As with us, the shiftless sportsman on unmanaged range blames the game shortage on "vermin."

The German farm country productive of game is remarkable for three things: (1) the detail with which farm practice and game management are dovetailed, (2) the variety of species co-existing on the same area, (3) the low per cent of artificial propagation.

Managed farms yield a large and dependable game crop consisting of various combinations of pheasant, Hungarian partridge, hare, rabbit, and roe deer. Pheasants predominate on the heavier wetter soils; partridges on the lighter warmer loesses and sands. A heavy crop of both pheasant and partridge is seldom found on a single property. Combinations of pheasant, hare, and roe prevail on rich soils. On light soils the usual combination is partridge and hare.

One of the regions most productive of both agricultural crops and game is Lower Silesia, which lies on the upper reaches of the River Oder, and comprises that east-

ward projection of Germany abutting on southern Poland and eastern Czecho-Slovakia. The rich plains around the capital city, Breslau, are "the best soil in Germany," and correspond to our cornbelt. Sugar beets are the cash crop. The fields are traversed by a system of small portable tramways to haul the beets and the heavy machinery used for their cultivation. Potatoes, small grains, clover, and alfalfa comprise the remainder of the rotation. There is some dairying but no pasture, the wetter meadows being worked for hay, rather than grazed directly by stock.

On this rich central plain there is no timber except the **remises** planted for game cover, but as one climbs into the sandier rolling uplands timber progressively increases until finally, on the mountains, the country becomes solid forest.

The Silesian land-holdings are both large and small, but even where small the owners are congregated in villages. Hence the landscape in either case is one of wide horizons, broken only here and there by densely clustered habitations. There are no fences and hence no fencerows. The frequent drainage ditches are lined with a very narrow fringe of alders and willows. All highways are lined with small fruit trees. In neither case, however, is there any tall grass cover, the ditchbanks and roadsides being kept short by frequent hand-mowings for hay.

The climate of the Silesian plain is similar to that of Ohio; the ground is usually bare most of the winter, but in exceptional years several feet of snow may lie for months.

Where, in such a highly cultivated landscape, shall one find shelter for game? The answer is the remise—a small concentrated spot of cover planted especially for pheasants, but used also by hares and roes. On an October evening I have frequently seen, on the fields adjacent to a single remise, as

Remise system on newly-cut hay meadow.



by Aldo Leopold



# Management

## SILESIA



Gathering up after a drive.

many as 75 pheasants, half a dozen roe deer, and a dozen hares.

A typical remise covers an acre or two, and consists of an outer belt of hedged Norway spruce, next a belt of taller unhedged spruce, then a belt of alder, and finally a central core of hardwoods, or—if on wet land—willows and cane (*Phragmites*). Fig. 1 shows the design and operation of a typical remise.

Remises are located on haymeadows or on waste spots if there are any; pot-holes, gravel and sand pits, old slough bottoms, banks, and the like. Failing such spots, they are planted on good beet land. The Silesian farmer uses his land more intensively than we do, but he does not begrudge a few acres of good soil for wildlife remises, or for a woodland "park" around his farmstead.

The best remise system I examined had 10 cover units on an estate of 780 acres, or one per 80 acres. On this estate the area in remises, park, and food patches was 8 per cent of the total. The average size of a remise was 2 acres. The average distance between remises was a long pheasant-flight, i. e., about one-third mile. Fig. 2 shows a typical estate in relation to its remise system.

When the spruce in a remise gets too large for good cover, either a new outside belt is planted, or the big trees are chopped down and replaced by young ones. Such replacement is commonly done by stages, so as not to sacrifice the utility of the remise during the period when the new trees are small. Such a thing as grazing livestock in a remise is unheard of.

Some remises are laid out in unpleasing geometrical squares and triangles, but usually enough irregularity is maintained in

shape, size, and content so that the system of remises greatly enhances the beauty of the farm landscape. The photographs include a farm landscape with its remise system.

The remise is usually designed to facilitate drives as well as to shelter the birds, of which more later.

Most remises have a food patch adjacent or nearby. These patches consist of standing corn, and a perennial sunflower called *Topinambur tuberosa* (Jerusalem artichoke). The stem of this plant bears no seed, but the roots bear a whitish potato-like tuber, about the size of a hen's egg, which, after



Kreisjagermeister and owner discussing a millet food patch for pheasants (at left). Remise in background.

the corn is exhausted, is eagerly eaten by pheasants, roes, and hares. The tubers are exposed by plowing during the fall. They are not spoiled by frost. Even after plowing there are enough tubers left in the ground to form next year's crop. A topinambur patch may last as long as ten years, after which the ground must be rotated to legumes and small grains to replenish soil fertility. Topinambur is also used in forest food patches for deer.

In certain regions this plant may be the answer to the question repeatedly asked by American game managers: What perennial can one plant for winter bird food? It cannot be recommended for use in agricultural regions, however, because in this country, it escapes and becomes a weed. It should be planted only in food patches surrounded by a wide belt of heavy sod.

The food patch alone does not suffice for winter feeding. Its function is to hold birds, rather than to prevent starvation. As soon as the corn is exhausted, hand-feeding begins. In selected remises straw is spread under the dense spruces and into this wheat or barley is thrown by hand. "Automatic"

hoppers are unknown (a reflection of the lesser labor costs in Europe).

All game gets winter greens from the alfalfa and clover stubbles, and in most years, acorns from the oaks in the parks.

The outstanding peculiarity of the Silesian pheasant range, and for that matter all other German game ranges, as compared with our Middle West, is the lack of high-class food-bearing weeds. Weeds not only tend to be excluded by the intensive farming and the frequent mowing of all grass, but even where they are deliberately encouraged (as was the case on one estate), they are of inferior quality—not above the grade of pigweed (*Chenopodium*). Some day we in America will learn to appreciate our small native prairie ragweed, which comes uninvited into our stubble, pastures, and waste spots, and the seeds of which sustain not only all farm game birds, but a host of songbirds as well. Europe has no weed food of comparable quality, and must make up for it by a more liberal use of grain and other cultivated plants.

The Silesian remises, then, offer an artificial but not wholly unnatural winter cover. I now already hear the question which springs to the lips of the American game manager: what about nesting cover? It is self-evident that the 50 pheasants which one sees feeding on the bare alfalfa stubble or newly sprouted small grains around a one-acre remise cannot possibly nest in that remise, even after their number has been trimmed down by the November shooting.

The answer is that there is no nesting cover, and furthermore there is no attempt to provide any. The pheasants nest in the alfalfa, clover, and grain fields, often at a great distance from any remise. In alfalfa and clover they of course sustain a heavy loss from mowing machines, just as with us. The grain, however, offers a safe nesting place, since most of it is planted in fall, grows early in spring, and stands uncut till July, by which time all except repeat-nests have safely fledged. Consequently management seeks either to force the birds out of the alfalfa and into the grain, or to salvage the hayfield eggs for artificial rearing. There are three systems in use for accomplishing one or both of these solutions of the hayfield problem.

The first consists of systematically dogging the alfalfa, clover fields, and hay meadows just before the first eggs are laid. The purpose is to drive the nesting birds

(Continued on page 28)

Ditchbank hand-mowed for hay with wooded "park" in background. One hundred pheasants, as well as hares, rabbits and roes, were feeding in sight when this picture was taken.



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American Wild Life





# RECENT PREDATOR STUDIES

*by Paul L. Errington*

**F**OR nearly eight years, now, cooperative studies of predators and their relation to certain types of prey have been in progress in north-central states, principally in Iowa and Wisconsin.

In this connection, attention has been given to nearly all kinds of hawks, owls, and fur-bearing predators that occur in the region. Most thorough has been the work on the marsh hawk, the red-tailed hawk, the great horned owl, the red fox, and the mink. As a background for conclusions as to the food habits of these five species alone, we have data from the examination of a total of about 15,000 stomachs, pellets, or fecal samples, and specimens of partly eaten prey recorded from nests, dens, or feeding places in the field.

The researches on prey populations have been intensive in nature and have dealt for the most part with the bobwhite quail, the ring-necked pheasant, the blue-winged teal, and the muskrat, but some work has been done on populations of other species as well.

Conducting the studies of predators and prey together frequently permits an investigator to analyze the data from a much broader viewpoint and to extract meaning that would otherwise be missed. When, for example, the proportions of some prey animal in the diet of a predatory species change in a pronounced manner, it may be very illuminating to check over the population data and possibly find out why.

Cases in point are afforded by the data from the drouth years of 1934 and 1936. Strongly increased representation of muskrats in the diets of foxes and mink was plainly to be correlated with the drying up of marshes and watercourses and the resulting exposure of the muskrats to enemies through being left stranded in dry environment or forced to wander about the country or to crowd too much in the pot-holes still remaining.

Decrease of ground cover during the early part of the 1934 drouth summer was accompanied by much greater destruction of the nests of ducks and other ground-nesting birds by enemies, and predators generally took advantage of other animal populations that were similarly exposed. Insects such as May beetles, though apparently no more abundant than the year before, figured far more prominently in the 1934 diets of hawks, owls, foxes, etc.

The clearest evidence on the relation of predators to a single prey species has come to light through studies of wintering bobwhite populations. Readers who may care to consult a technical account of this work are referred to "The Northern Bobwhites' Winter Territory," by Paul L. Errington and F. N. Hamerstrom, Jr. This is Research Bulletin No. 201 of the Iowa Agricultural Experiment Station, Ames, Iowa.

Some of the principal conclusions from the quail researches may be briefly summarized.

There seems to be room for only about so many quail to winter in the wild under given conditions, the number depending upon the carrying capacity of the land. Carrying capacity tends to remain remarkably definite for the same area, year after year, but it is different for different areas. It commonly ranges from a few birds per square mile up to a hundred or two and is often far lower than a person might guess. We cannot explain in detail what determines carrying capacity, but it is partly a matter of

food, cover, and the intolerance of the birds themselves to further crowding, either by more quail or by such forms as pheasants.

Predation upon bobwhites wintering in the north has been centered upon individuals that were weakened as by hunger or wounds (and which probably would have died anyway during the next cold snap) or upon those that exceeded the capacity of their environment to accommodate.

Populations that were sound, well fed, and within the carrying capacity of the land, wintered with comparative security from predators, even when the latter were abundant. Surpluses were doomed, nevertheless, for the reason that the environment couldn't take care of them, even when predators were scarce. Whether the predators were horned owls, Cooper's hawks, foxes, dogs, or creatures much less formidable did not seem to make a vast amount of difference so far as quail survival was concerned.

In sort, despite the emphasis traditionally placed upon so-called "vermin control," campaigning against the predators in an effort to protect vulnerable populations of northern bobwhites appears useless or worse.

Losses may be reduced by other means, however. Feeding during crises may prevent much starvation and indirect mortality from cold and enemies. Carrying capacity of quail environment may perhaps be raised by proper management of food, cover, and covey ranges. If shooting is to be done, the open seasons should be scheduled in the fall when the coverts are most likely to be over-populated. The shooting should be done as early as practicable, in order that the heaviest toll from the guns be borne by that proportion of the population doomed to be lost anyway—the vulnerable surplus.

Carrying capacity may have an important role in the life history of the bobwhite in summer and fall as well as in winter. While H. L. Stoddard's classic work in Georgia has shown that reduction of certain egg-eating predators may be followed by substantial increase of young birds available for sporting purposes, investigations in Wisconsin suggest that the net rate of increase is dependent chiefly upon the degree to which the environment is filled up by the birds already there.

Assuming that the environment is favorable, the increase from a rather low seed stock is greater than that from a higher one and becomes progressively less as populations rise. On the observational areas which have yielded the most reliable information, these rates of recovery during the breeding season have been quite uniform for a given population level in a given area, seemingly regardless of differences in the kinds and numbers of the nesting enemies that were resident.

As concerns predation upon other prey populations with which we have done more or less work, there are questions by the dozens that we cannot answer, but some things stand out with increasing clearness.

Exceptions notwithstanding, predators as a rule are not guided in their hunting by "taste" for some particular kind of prey. Preference seems to enter into the equation very little and human "moral" standards not at all—and this statement applies to the feeding of wild creatures in general, of songbirds no less than of hawks. By and large, the prey that is taken is that which is most available, that which a given predator recognizes as food and is able to catch and to handle.

(Continued on Page 30)





Typical beaver dam.



Before trapping seasons were declared on beavers, wide use of live trap shown above was made in order to control the ever increasing number of these valuable fur-bearers.

# Pictorial



Skinning a beaver.

Beaver Swimming. Only the hind feet are used. The front feet are used to carry sticks, roots and mud to build the dam.



Placing the trap. The loose wire sides prevent any injury to the animal.

The trap is sprung when the swimming animal touches a wire trigger extending from the bottom.





Ringneck pheasants held for spring release at one of the State Game Farms.



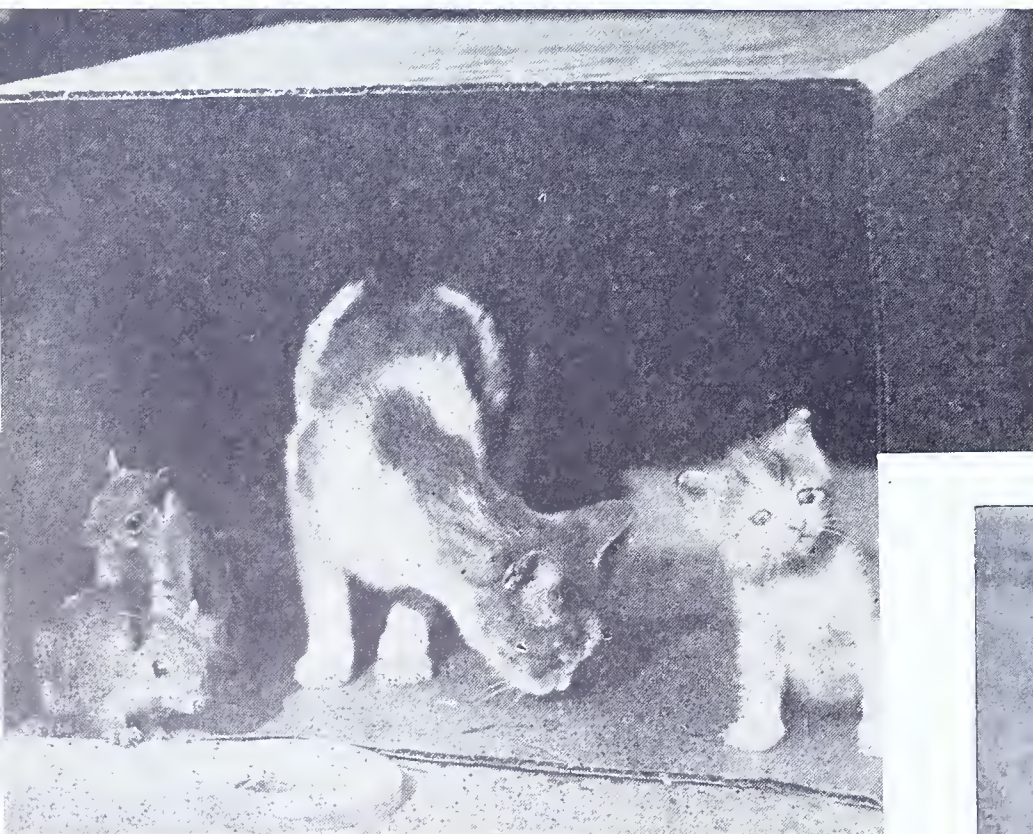
Control the enemies of small game. Young rabbits are easy prey for stray house cats.



# Your Game



Lunch is served. Fawn deer are usually born in May and June. They should not be picked up by curious people and taken home.



This cat foster mothered a pair of gray squirrels. They have also been known to mother the young of foxes, raccoons, skunks, and other small mammals.



This black bear cub was saved from a forest fire and reared by a Game Refuge Keeper and his family.



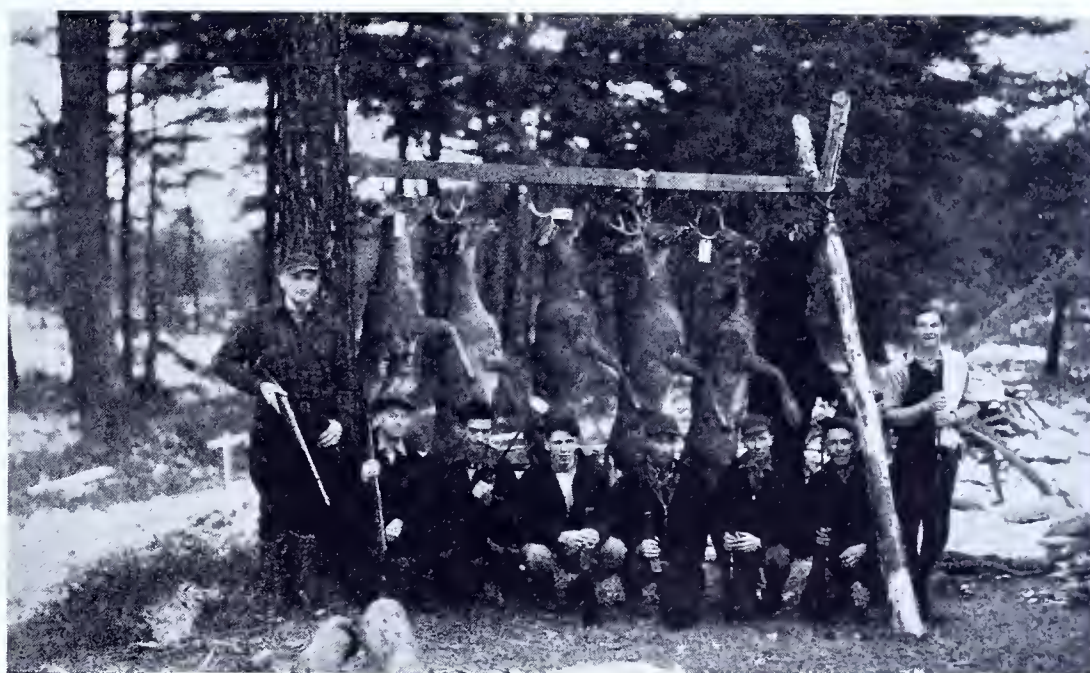


# news in pictures

Above: W. L. Rockey, of Harrisburg, with Clark's Valley Dan, well known field trial winner, and a nice Lebanon County ringneck.

Center: Foster Hollow Camp, Lycoming County, had a successful season year before last. Haven't heard from them this year so far, but understand they again did their stuff. Preliminary figures show that over 18,000 legal bucks were taken last season.

Below: Part of the large gallery which viewed the fall gathering of the Capital City Field Trial Association, at Indiantown Gap, Lebanon County.



Above: Dr. E. K. Tingley, of Marietta, with his famous pointer, Hexer's Carolana Jack, winner of many notable field trials. Dr. Tingley also owned the late Marietta Joe, Champion of Champions.

Below: Another view of the large crowd assembled to watch the action at the fall meeting of the Capital City Field Trial Association. These trial grounds are located on the picturesque Indiantown Gap Military Reservation, Lebanon County, Pa.

It is hoped soon to hold some of the biggest trials in the eastern United States on this fair-way.







1. Doe deer with head pinched in narrow crevice of tree. She was feeding inside the hole and when she raised her head it stuck fast.—Photo by Refuge Keeper Wm. G. Matthews. 2. Hot on the trail are these beagle hounds belonging to G. I. Purnell, of Bellefonte. He says they always bring home the bacon.—Photo by Seth Gordon. 3. Here is a fine 190 lb., 12 pointer, killed in Northumberland County by W. O. Goodman, of Watsonstown.—Photo by H. C. Fisher, Deputy Game Protector. 4. This deer tried to clear a snow fence and falled. Its injuries were so serious it had to be killed.—Photo by Game Protector W. T. Campbell. 5. Examining deer killed by hunter in the Pocono Mountains.—Photo by Seth Gordon. 6. Members of Tresekow Gun Club on feeding expedition. 7. F. W. Fisher, of Paradise, showing unique beaver cuttings found in Sullivan county. 8. Left to right: Earl Gotshall, Milton and Raymond Wiest, all of Pillow, Dauphin County, with bear killed by Milton on Thanksgiving day. 9 & 11. Members of the Grampian Sportsmen's Club with starved deer. They fed and released the animal when it was strong again.—Photo by Refuge Keeper W. R. McClure. 10. Seeds and shrubs planted on State Game Lands No. 31, Jefferson County, by sportsmen and Boy Scouts. The ground was prepared by W.P.A. labor.—Photo by Refuge Keeper Earl E. Smith.





**H**. H. SMITH, of Clarks Summit, stopped in the office the other day and told me about the fun some of the Scranton boys are having catching starlings in old barns, towers and church steeples. Five or six men climb into these places with gunny sacks and flashlights; then the fun begins. When the light is flashed in corners, the birds take it for an opening and soon hundreds cover the spot. H. S. said it is easy to catch from ten to twelve hundred starlings a night in this manner. They are later used for live shoots, and at five cents per bird they provide fine sport for the shooters and a nice revenue for the club. The dead birds are picked up by local people, mostly of Slavish or Italian descent, who take them home and eat them.



**N**EVER get the idea that farmers aren't interested in wildlife conservation. They are. I spent an hour or so each day at the Pennsylvania Farm Show this year watching an almost endless stream of humanity pass our large game management exhibit. I couldn't begin to guess how many thousands stopped to look at the display, but the Game Protectors in charge told me that they had so many questions hurled at them that they were swamped half the time. The officers said that a lot of landowners were interested in the Game Commission's farm-game program, a thirty foot model of which was on exhibition. A project of this kind, where the Game Commission leased the hunting rights on about 1,500 acres of land in Chester County, worked admirably during the past season. I talked to a lot of farmers at the show myself and was more than a little surprised at their interest. If sportsmen go about it the right way they can do a lot toward securing the landowners' cooperation. All he wants is a little recognition.

One of the main attractions of the Farm Show was the exhibit of Chukar partridges, the newest game bird introduced into Pennsylvania coverts from India. This hard, fast-flying, beautiful plumaged creature from the far East evoked a lot of Oh's and Ah's from everybody who saw them. They will be released for the first time next spring.



**T**HE number of archers is increasing rapidly in Pennsylvania. Among the most ardent devotees is Major Lynn G. Adams, Superintendent of the State Police, who annually spends some days afield with a bow and arrows and regards it as great sport. Your humble servant took a turn at the game two years ago with Harold Stahle, Harrisburg enthusiast, and found it not bad. I had an excellent shot at an eight point, but just wasn't good enough.

Last season Edgar Oswald, of Nazareth, got a nice buck with this ancient though popular weapon. The animal hove into sight from behind a pine tree about twenty yards from young Oswald, who let fly immediately. The impact of the arrow stopped the animal only for an instant before it recovered and sailed down the ridge like an express train. It was snowing quite hard but Oswald

started after it. The arrow had caught a twig and pulled out about a hundred and fifty yards away.

Our young archer tells me the buck made eight beds before it finally succumbed to internal hemorrhages. The arrow had cut a rib in half, passed through the diaphragm into the paunch and touched a rib on the opposite side. He had to carry it pack sack fashion for four hours before he met one of his companions.



**S**TARTED out to take some motion pictures the other day and almost had the entire trip spoiled. I no sooner began operations when I found a rabbit caught in a trap set near a hole. It made me pretty hot under the collar for a while. The poor creature must have been putting up a pretty stiff battle in an effort to free itself, judging from the way the grass and brush had been flattened out and torn up around the entrance to the hole.

All good sportsmen resent this practice and it is hoped it will be prohibited by the present Legislature. One of our readers, Hayes T. Pfitzenmeyer, just dropped me a note the other day pointing out that it is just as easy to catch fur-bearers in the baited cubby hole set as it is by placing traps in holes.

He said he was sick and tired finding the twisted and mangled bodies of cottontails in front of woodchuck burrows and skunk dens. Once this type of trapping is outlawed our rabbit supply will increase a hundred fold.



**D**ID you ever stop to think how much moneys worth of game you could legally kill in one season on your \$2.00 license? Let's figure it out on last season's bag limit. 1 wild turkey @ \$15.00; 8 ringnecks @ \$2.50; 8 grouse @ \$10.00; 20 quail @ \$2.50; 20 rabbits @ \$1.00; 20 squirrel @ \$1.25; 10 raccoons @ \$5.00; 1 bear @ \$50.00 and 1 deer @ \$25.00, or a total of \$335.00.

This does not include any migratory game such as ducks, geese, woodcock, snipe, rails, gallinules, coots, or any fur-bearers.

When you stop and think seriously you find that the \$2.00 license fee has to be stretched a great deal in order to provide an adequate supply of game each season. One ringneck alone costs more to restock than the license itself.

Mr. H. L. Meacham, Summerdale, Perry County, reports a rather interesting method of taking foxes and wild cats.

His equipment consists of carbide light attached to a miner's cap with reflector, his gun and plenty of patience.

The object is to locate the trail the fox is using and to post yourself in a spot that will be open for a shot from any angle. The light is used to spot the prowler.

To hunt in this manner, requires a great amount of skill and you must be sure what kind of eyes are glaring at you when the light beam registers a pair.

You would not want to have a farmer present you with a bill for a cow that may have wandered into your "spot."

Mr. Meacham's kill to date consists of two wild cats, five gray foxes, and many stray house cats.





# THEY'RE COMING

By WILLIAM C. GRIMM

**T**HE days of early spring are days of anticipation. How eagerly we await the time when the wedged-shaped flocks of wild geese will again be headed northward; wild wings silhouetted in the sky at sunset, as the vanguard follows the retreat of the Ice King into the vast realms of the far north. Those are truly glorious days, those days when the spring procession of the birds is at hand. It is not at all necessary that one be a confirmed bird student to feel the thrill that pervades the reappearance of the flocks in our woodlands and in our marshes. The seasonal departure and return of the birds has had a peculiar fascination to men of all generations and all ages. It has been the subject of much speculation. It has long been one of the unfathomable mysteries of nature.

## Early Legend

Standing upon the northern shores of the Mediterranean, the ancients gazed out over the wide expanse of water, as the winged myriads disappeared on the distant horizon. Whither had they gone? That nobody exactly knew. With the return of spring the legions returned from over the water. It was a favorite theory that they hibernated in the watery depths of the sea. The real solution of the mystery remained for another age but the facts, as we now know them, are more fascinating than the fanciful abstractions of the ancients. In recent years we have learned a great deal about the subject of bird migration but there are many chapters which are still shrouded in mystery. We have just begun to gather together the threads of knowledge and to weave them. Perhaps we will eventually be able to close up the gaps and reveal the whole of this marvelous story.

What instilled the migratory instinct into the birds of the northern hemisphere? To answer that question we must take a little journey back into the dim past geological ages. There was a time when the climate of the northern continents was more equable than at present. Tropical forests extended north practically to the present polar regions. At that time, under such conditions, it was not necessary for birds to migrate. Food was doubtless plenti-

ful throughout the year. It is reasonable to assume that the ancestors of our northern birds were resident the year round as are the birds of the southern hemisphere and the tropics, even to this day.

## Glacier Movement

The advance of the Great Ice Sheet, during subsequent ages, brought about profound changes in the climate. In the course of time the glacier ice had covered a large portion of the land. The birds which had made their home in this part of the earth were forced to retreat toward the warm equatorial regions. During the periodical advances and retreats of the ice sheet the birds doubtless moved northwards to their original home and south again when they were compelled to do so by the movement of the glaciers. With the establishment of the seasonal changes this movement became well entrenched. During the summer season the homelands of the north offer an abundance of all kinds of food. The reverse is true during the winter; at that season food is scarce



and ice and snow adds to the difficulty of procuring what little there is to be had. It seems quite likely that migration is due to the food supply, the relative scarcity and abundance between the summer home and the adopted winter one.

## Harbingers

Between the first and the tenth of March, the robins return to our locality in some numbers, although a few may be seen throughout the winter months. Not long afterwards come the bluebirds, grackles, red-wings, mourning doves, meadowlarks, and others which have spent the winter a relatively short distance to the southward. These birds spend the intervening months in our own Southern States. The distance between their summer and winter homes is at most only a few hundred miles. That is why they are the first birds to arrive in our Northern States in spring. As the season progresses the influx consists of birds whose winter homes are farther to the south. This is, of course, a general rule and there are some exceptions. The catbird, for example, winters in our Gulf States, arriving in Western Pennsylvania the last week of April about the same time as the wood thrush, who,

winters in Central America, while the barn swallows, which often go to the mainland of South America, may be skimming above our meadows by the middle of the month.

The regularity with which the birds return north in the spring is well known to the careful observer. One can, with a fair degree of accuracy, tell when a given species will arrive in any particular locality. Seldom do they vary more than a few days. Thus I have learned to expect the phoebe and the flicker between the 20th and the 25th of March. During the past ten years I have met the meadowlark eight times between March 16th and 19th; one season I saw them for the first time on the 20th, and the other on the 23rd. Six times in the same period our wood thrushes appeared on the 28th and 29th of April. The time of a bird's arrival apparently is dependent upon the normal weather conditions and unfavorable conditions have little influence except to cause variations of a few days.

## May-day is Hey-day

It is May when most of the long-distance travellers arrive in our woodlands and orchards. Then comes the high tide of the flood. The tree tops are literally alive with the dainty warblers—"the delight and despair" of the amateur bird student—most of them enroute from the sunny tropics to the coniferous forests of the north. On these sunny mornings I listen attentively for the voices of several birds, which I know are about due. From the fresh green boughs of the elms along the creek comes a song that tells me the Baltimore oriole has returned from Panama. The familiar "chip-churr" of a tanager announces that they have come back from northwestern South America. May brings us our yellow-billed cuckoo, which spent the winter in Brazil; the wood pewee, from Ecuador or Peru; the crested flycatcher, who wintered in Colombia; and the night-hawk, which may have been to far-off Argentina.

One of the most remarkable things in all nature is the ability birds have of returning, year after year, to the land of their birth; to the same tract of woods, the same fields, or the same marshland they inhabited a year previously. We have long suspected this fact. We have seen the same species in certain localities year after year. Sometimes they nest in the same trees, the same bird boxes, or the same clump of bushes. Each spring the barn swallows return to a certain barn. Can they be the same swallows which nested there before? We have liked to believe that they were, of course, and now the scientific bird banders are proving beyond a doubt that it is not only possible but quite probable that they are the same birds or their offspring. This leads us to wonder how they find their way. What guides them with such unerring accuracy on their uncharted path-





# BACK AGAIN

Illustrations by DR. GEO. M. SUTTON

way over the hundreds, even thousands, of miles between their summer and their winter homes?

One is naturally led to the conclusion that migrating birds would follow the physical features of the land; the coastline, the mountain ranges, and the river valleys. As a matter of fact these features seem to be regarded of very minor importance by avian navigators. The most popular route between the mainland of North America and Central and South America is that across the Gulf of Mexico. Multitudes of migrants from the Eastern and Central States gather on the northern shore of the Gulf, then embark upon a journey of from 500 to 700 miles over its watery wastes to the shores of southern Mexico and Yucatan. Few species of birds use the island route between Florida, Cuba, and Jamaica to points farther south. The Bobolink uses this route between his home in our Northern States and his winter range in Argentina. Very few, except some of our swallows, follow the land route through Mexico and Central America. It is quite likely that the routes that have been adopted were those which afforded the best feeding grounds and that they are the result of ages of experience.

## Fly by Night

Most of our smaller land birds migrate by night, alternating a night's journey with a stop-over of a few days. Night flying has its advantages; there is less danger from hawks and the daylight hours can be used in feeding. The birds using the Gulf route can spend the day feeding and resting on its northern shore. In a single night's journey they can encompass the five to seven hundred miles, arriving in the forested regions of southern Mexico or Yucatan by daylight the following morning. This seems like an arduous journey for small birds to undertake but even the diminutive ruby-throated hummingbird—with a body no larger than a good-sized bumblebee—successfully accomplishes the feat! The swallows, chimney swift, and nighthawk migrate by day, travelling leisurely and feeding enroute. Wild ducks, wild geese, and the shorebirds migrate both by day and by night. During the season of migration—from March until June—we are likely to have many pleasant surprises. What new arrivals will come to us on the next wave? Overnight they may come, strangers perhaps, some old friends we shall be glad to meet again. These are the thrills that only the keen lover and observer of birds may know.

Just as soon as winter releases its grip and the waters are free from ice, the wild ducks and geese wing their way northward.

High overhead the V-shaped flocks of "honkers" set their course, and, with the rapid beating of powerful wings, push their way toward the breeding grounds. They herald the approach of spring. It is not difficult to understand how the geese know when it is time to start north. It is different in the tropics; there is no spring, nothing but eternal summer, in the winter home of the wood thrush and the oriole. How do they know when it is time to start? What tells them that several thousand miles to the northward the snows are melting and the buds are beginning to swell? I wish that I knew the answer to that question; that I could fathom that great secret of the birds.

## Strange Routes

Many birds have strange migration routes. Mr. Wells W. Cook, who was an outstanding authority on bird migration, pointed out the route of the golden plover more than two decades ago. From its breeding ground on the Arctic coast of North America the bird makes a preparatory flight southeastward to the coast of Labrador, where it fattens for several weeks on the abundant native fruits.



From Labrador a short trip across the Gulf of St. Lawrence takes it to Nova Scotia, the starting point of a flight of 2,400 miles over the ocean, ending on the coast of South America. That is the longest single flight known to be made by any bird; even in these days of record-breaking, non-stop flights the golden plover holds a place of honor. From its winter home on the pampas of Brazil and Argentina, the plover starts the return journey by a flight to Central America; thence to southern Mexico, across the Gulf of Mexico, through the interior of the United States and Canada to the Arctic coast, arriving at the breeding ground in early June. Its summer and winter homes are 8,000 miles apart and the route by which it returns to the north in the spring is 2,000 miles west of the route used on the southern flight! There are other birds that use different routes on the spring and fall journeys. The Arctic tern, whose summer home is



also along the Arctic coast of North America, winters within the Antarctic Circle 11,000 miles away! He is the champion long-distant migrator. For eight months of the year he never sees a sunset and during the remaining four months enjoys more daylight than darkness.

## Males First Arrivals

It is customary for the male birds, in most cases, to precede the females on the trip north. This is especially true among the smaller Passerine or song birds. The first redwings that return to the cat-tail marshes during the month of March are the old males, resplendent in their glossy black coats and their scarlet and gold epaulets. The females may arrive a week or two after the first flocks of male birds. About the fifth of April of each year, I watch the sugar maples for sapsucker signs. On some of the trunks I am pretty sure to find freshly-drilled, horizontal rows of holes from which the sap is flowing freely. Then, if I wait patiently, I am rewarded with a glimpse of the sapsucker as he pauses to lap up the sweet fluid which fills his cups. I say "his" because the first birds are practically all males. You may know them by their scarlet throat patches; the females which arrive a week or so later have white patches on their throats. The first robins, the first wrens, and the first of the grosbeaks are sure to be males.

March! The days are growing perceptibly longer. The "pussies" are creeping out along the slender branches of the willows. On the warm sunny days the chorus of the spring peepers comes up from the pools. Out among the cat-tails I hear the liquid "oak-a-lee" of the blackbird. A robin mounts the topmost bough of budding red maple and pours out his vocal tribute to a dying day. Then I shall listen in the night to the reassuring notes of the feathered travellers, perhaps I shall see them crossing the face of the moon as they wing their way across the heavens. Yes, they're coming back again.





# WITH THE CLUBS

## LOST

One 'Coon dog, male, weight 45 lbs. Color: Dark red with white stripe under part of neck. One white toenail and one red, both on hind foot. \$25.00 reward. Please notify Harry Mouck, R. D. No. 1, Punxsutawney, Pennsylvania.

One female beagle hound, tan and white, license No. 639, stands 14 inches.

One female beagle hound black and white with tan markings, stands 13 inches.

One male 'coon hound, blue tick brown ears, black head markings, stands 20 inches.

Reward: Notify J. R. Diringer, 900 Cottman St., Philadelphia.

Mr. Herman P. Buss had quite a surprise during the small game hunting season. Finding his setter on point at the edge of a thicket, he stepped up and peering in saw a beautiful ring-neck making his getaway. He quickly fired, but the shot apparently just dazed the bird and he jumped ahead and grasped it. But imagine his surprise on seeing a rabbit, its head shot off, furiously kicking just near the bird.

As Ripley says: "Believe it or not."

The Presque Isle Sportsmen's League, which boasts several thousand members from Erie and vicinity, is looking forward to a banner year in 1937 under the capable leadership of Dr. John J. Koehler, the motivating spirit behind the League last year.

Prizes for game feeding are being offered to high school boys by the Sportsmen's Council of Titusville. Four awards will be given, namely \$5.00, \$2.50, \$1.50 and \$1.00. This live wire organization recently acquired a new club house with an indoor shooting range.

A similar contest is being sponsored by Meadville Sportsmen. Ward H. Doner, the Crawford County Game Protector, will instruct the boys how properly to construct various types of feeders and shelters.

The Schuylkill Haven Fish & Game Protective Assn. is trapping rabbits off a game refuge it established two years ago and releasing them on open hunting territory. This is a striking example of what the small sanctuary will accomplish. Scatter a lot of them throughout the small game sections of the state and you got something.

The Upper Perkiomen Valley Sportsmen's Club bought a few acres of land and is having it fenced in order to propagate rabbits. This is a worthy project and if more clubs would do likewise they would help greatly to increase the cottontail supply.

The members of the Remington Club of West Reading feel that

C.C.C. roads should be closed during the hunting season.

They pack their supplies into camp, which is about two and one-half miles from the highway. The members say that as much as they need a road they prefer to have them closed to prevent accidents, illegal shooting, and any further inroads on the wildlife of that section.

The Truxall Sportsmen's Association, Apollo, set a good record in 1936. They raised 125 ringneck pheasants, purchased and liberated 25 cottontails and 12 jack rabbits, planted an acre of corn and purchased 25 bushels of corn for winter feed.

The Frackville Game and Fish Association, organized a year ago, released 46 crates of rabbits, 125 ringnecks, 13 raccoons, and distributed 38 cans of fish during 1936. The club is holding 18 cock pheasants and 35 hens for spring release.

Carl A. White, President of the Kiskiminetas Twp. Sportsmen's Association, says his club is strong for the cooperative farm-game movement. The club has conducted a 50 acre refuge for several years with great results.

Members of the Rich-eyville Rod and Gun Club reared and released fifty adult ringnecks, constructed numerous feeders, and built and paid for a splendid skeet layout last year. The Secretary, William Sloan, Jr., says "GAME NEWS is a great magazine and must be doing a world of good. Keep up the fine work."—Thanks a lot Comrade Sloan.

Mr. Frank V. Stutzman of Twin Lakes, Pike County, reports the rescue of three deer

from the ice on the middle of Big Spring Pond by local sportsmen. He said the men made a heroic effort to save the animals.

## TRAP SHOOTS—1937

- |               |  |
|---------------|--|
| March 6       | Reading, Pa. South End Gun Club—Auld Lang Syne Handicap. George E. Nuebling, secretary, 1034 North 6th St., Reading, Pa. |
| April 24      | Quaker City G.C., Philadelphia, Pa.  |
| May 23        | Boyertown, Rod & G.C., Boyertown, Pa.  |
| May 29        | Roxborough G.C., of Roxborough, Phila., Pa.  |
| May 30        | Maytown G.C., of Maytown, Pa.  |
| June 31       | Quaker City G. C., of Maytown, Pa.   |
| June 17-18-19 | Valley Gun and Country, Shamokin, Pa., (State)   |
| June 26       | Quaker City G.C., Philadelphia, Pa.  |
| July 24       | Quaker City G.C., Philadelphia, Pa.  |
| September 6   | Roxborough G.C., of Roxborough, Phila., Pa.  |
| September 26  | Boyertown Rod & G.C., Boyertown, Pa.   |
| October 30    | Quaker City G.C., Philadelphia, Pa.  |



Sportsmen of Glen Lyon, Luzerne County, turned out in large numbers to feed the game in that community. Stanley Mesavage, Forest Supervisor and Harry Meiss, Game Protector, supervised the program.



# SCATTER LOADS

From Hughes, Arkansas, comes word of the organization of a Junior American Wildlife Institute by Harry Williamson, superintendent of the Hughes Rural Special School District. "We should have our young people thinking about the conservation of our wildlife," says Mr. Williamson and he has proceeded to enable them to do so.

In Dallas, Texas, schools, E. H. Purcell and Jack Koonce are developing the Junior Conservation Corps "an organization which offers boys and girls an opportunity to learn hobbies of the out-of-doors."

The Junior Game Wardens of North Dakota have recently set up a system of merit badges for the performance of good deeds benefitting wildlife. It is hoped that this will inspire the organization of new chapters throughout the state.

A negro conservation society has recently been organized under the sponsorship of the Fish and Game Conservation Association of Anne Arundel County in Maryland, according to the American Wildlife Institute.

At the present time this organization has a membership of 19 serious-minded colored people, all owners of farms, who desire to do their part in the restoration and conservation of wildlife.

Colored folks are keen hunters the country over and to know of their active work in wildlife conservation and restoration is encouraging.

A 4,428 acre tract in the Illinois River bottoms in Mason County, Ill., is being restored by the U. S. Biological Survey for the use of wild ducks and geese. The area was set apart by a recent executive order as the Chautauqua Migratory Waterfowl Refuge.

A 2,200 acre wildlife refuge where U. S. Biological Survey scientists will conduct research and experiments for the development of better wildlife management practices has been established by executive order in the historic Patuxent river valley in Maryland.

The Maryland State Game and Fish Protective Association is sponsoring a contest on the winter feeding of small game. Any boy and girl between the age of ten and eighteen are eligible. A beautiful silver cup will be awarded the winners.

"Wildlife for the Future" and "The Dollar in the Duck" are the titles of two booklets recently issued by the American Wildlife Institute with headquarters in the Investment Building, Washington, D. C. Both of these are beautifully conceived physically and carefully written and edited. Both are presented from the viewpoint of the sportsman, and designed for the intelligent sportsman and for business men who have a stake in the revenues derived from hunting and fishing.

A well preserved elk antler, 4 ft. long and 10½ inches in circum-

ference at its base, was excavated with a steam shovel from a ten foot sand and gravel bed along the Susquehanna River, near Highspire, Dauphin County.

The Potter County Journal, under date of December 16, 1897, carried the following notes: "Mack Logue has killed an even hundred ruffed grouse this far up to date." That same year a Potter County gun club wiped out five hundred birds.

In Saskatchewan, to control the crow population, a number of the birds were banded and released with large rewards for their capture. One bird carries a price of \$500 on its head.

Arthur Clive, Rigley, Pa., has subscribed to the GAME NEWS for ten years.

Stuart L. Thompson, writing in the Canadian Field Naturalist, comments on the swimming habits of some of the smaller mammals. Once he observed a black squirrel swimming from a large island to the mainland, about 800 yards distant. On another occasion he observed a woodchuck swimming across a river. This animal accepted help and was lifted into his canoe on the paddle blade and coolly settled down to rest on a dufflebag. When the canoe approached land "Chuckie" simply flopped overboard and swam the few strokes to the bank.

The proof today is clear that a beaver's value is in his work and not solely in his hide. The facts have been uncovered in thousands of areas in the West. Beavers were

trapped out, ponds and lakes dried up, the water table lowered, and grass-covered valleys reverted to deserts. Soil erosion and dust storms followed which are the tragic pictures of today.

Let me give you an example. Two trappers took out 600 beaver pelts one winter from the headwaters of Silver Creek and its tributaries in the southeastern part of the Ochoco National Forest in eastern Oregon. With no beaver engineers left to take care of the dams, the ponds disappeared. Grassy meadows built up by sub-irrigation died out. Instead of 15,000 tons of pasturage along the streams, worth \$3.00 to \$5.00 a ton, the amount was reduced to a few hundred tons. Each year the water supply lessened. Good trout streams disappeared. Ranchers had to dig wells and pump water for their stock. Farmers lower down who had used the water for irrigation watched their ranches revert to a desert.

The trappers in one season cashed in their catch for \$4,000 or \$5,000. This may be compared to a continual yearly loss to stockmen of approximately \$50,000. It has now run into hundreds of thousands. The proof is plain that a dead beaver may be worth \$10 or \$15, while a live one is worth \$300.

It looks like a big month for radio broadcasts of interest to the sportsmen. Talks by the Departmental heads of the Game Commission every Friday night over WHP Harrisburg at 8:15, bring you the latest wildlife Conservation. Several other radio stations also have very interesting sports programs.



Daniel Mannix, of Rosemont, Montgomery County, with young Goshawk he is training in falconry.



# CURRENT TOPICS

## BEAVER SEASON MARCH 1-15

The two week open season in Pennsylvania on beaver begins on March 1 and closes March 15. The regulations relating thereto are as follows:

Only persons who are bonafide residents of Pennsylvania, holding a lawfully issued resident hunter's license, shall trap beavers; provided, however, that owners of lands actually residing thereon and cultivating such lands, and members of their families residing thereon, may trap beavers on such lands if they are open to public hunting and trapping, but not on any adjacent or other lands without first securing a resident hunter's license.

Any person having the right hereunder to trap and kill beavers shall be permitted to use and set not to exceed ten traps, provided, that should any person unintentionally trap more than three (3) beavers he shall within twenty-four hours report and deliver the excess so taken to a salaried employe of the Game Commission to be disposed of as directed by the Board.

The hides of beavers lawfully trapped shall not be possessed by any person other than the trapper or sold or otherwise disposed of until they are first examined by a salaried Game Protector of the Commission and a permit from the Commission has been issued to such person. It shall be the duty of each trapper to report the number of beavers trapped by him to any salaried Game Protector of the Commission and to have such animals tagged by such officer on or before March 25, 1937. Such tags shall remain attached to the beaver skins until they have been tanned and made up into commercial fur.

It shall be unlawful for any person to have in his possession any beaver, or green or raw beaver pelts, before March 1, 1937 or after the 25th day of March, 1937, which has not been properly tagged by an officer of the Commission.

## CARELESS HUNTERS PROSECUTED JUDGES COOPERATE TO SAVE LIVES

The relentless campaign which the Game Commission has been waging in an effort to stop careless shooting is accomplishing its purpose slowly but surely.

Hunters prosecuted for careless shooting during 1936 numbered 21. Not all of these were punished; a few were dismissed because of insufficient evidence. The rest were given severe penalties. Other cases are being pressed as fast as the Commission can arrange hearings.

Of particular import is the splendid manner in which the judges of the various courts are cooperating. Recognizing the human safety element behind the Commission's program, they have been willing to go the limit in sustaining and sentencing all deserving cases.

Cases prosecuted during the past year are as follows:

Harry Washington, Willow Grove, Pa., had his license revoked for five years for shooting and injuring James O'Brien, Montgomery County farmer, while he was husking corn. Mr. Washington was hunting ringneck pheasants at the time.

Harry A. Painter, of Kittanning, Armstrong County, was denied

the right to hunt for five years for having shot and injured John W. Calhoun, of Mosgrove, while hunting for squirrels.

Clair Loring, Black Lick, Indiana County, license revoked for five years for shooting and injuring John Kinter, of Indiana, in mistake for a squirrel.

Thomas W. Lauver, Milroy, Mifflin County, denied the right to hunt for five years for shooting and injuring Charles W. Penepacker, of Milroy, in mistake for a squirrel.

Leroy Quick, of Apollo, Armstrong County, had his license revoked for five years for shooting and injuring Roy Kerr, of Kiskiminetas Township, Armstrong County, in mistake for a rabbit.

George M. Miller, Community Township, Westmoreland County, was denied hunting privileges for five years for shooting and fatally injuring Otto Burke, Westmoreland County, in mistake for a squirrel.

In the case of Fred Rodkey, Clearfield County, whom it was alleged fatally injured Ray Emeigh, Akron, Ohio, while hunting large game on December 13, 1935, the referee withheld decision pending the results of a criminal prosecution.

Otto Nies, Johnstown, Somerset County, had his hunting license revoked for five years for shooting and injuring Thomas Overdorff, also of Johnstown, while hunting small game.

Galen Rager, Bedford County, license revocation for three years for shooting and injuring John Tyler, Cambria County, while hunting small game.

Roger Poorman, Bellefonte, was denied the right to hunt for five years for shooting and fatally injuring his father, Bertram Poorman, in mistake for a deer.

J. L. Meckley, Elizabethtown, had his license revoked for five years

for shooting and injuring Charles Dorman, Williamsport, in mistake for a grouse.

Basil Richardson, Cedar Run, three year's revocation of hunting license for shooting and fatally injuring Claude Sample, Lycoming County, in mistake for a deer.

Paul Weaver, Jersey Shore, was denied hunting privileges for five years for shooting and fatally injuring Joseph Bierly, also of Jersey Shore, while hunting rabbits.

Paul M. Seiple, Bangor, Northampton County, license revoked for five years for shooting and injuring Luther Stametz, also of Bangor. Mr. Seiple's gun was accidentally discharged while hunting deer.

Ira Forry, Harrisburg, Pa., license revoked for one year for shooting and injuring John Rupp, Mechanicsburg, Cumberland County, while hunting antlerless deer.

Gerald F. Watson, Newport, three years' license revocation for shooting and injuring Blair Black, New Bloomfield, in mistake for a squirrel.

Anthony Newvillis and George Wheeler, both of Wyoming, were discharged from a license revocation resulting from an accident when a gun in the hands of Mr. Wheeler exploded injuring both men.

Giuseppi Nocera, Edmon, Armstrong, Pa., five years revocation of his license for having shot and injured Andrew Gularsky, same town, in mistake for a groundhog.

Simon Long, East Renovo, license revocation suspended for insufficient evidence in the case of shooting and injuring Thomas Bodley, Renovo, while hunting wildcats.



Traps set in holes seriously deplete the ranks of small game every year.



# CURRENT TOPICS

The Commission has already begun proceedings for hearings on accidents which occurred during the 1936 hunting season, and all cases are scheduled to be heard in the very near future.

Of the cases already disposed of by the courts Gus Charles Swartzfager, Buffalo, N. Y., was sentenced to two years in prison, a fine of \$1000 imposed and his hunting license revoked in Pennsylvania for ten years for shooting and fatally injuring George Karg, of Fryburg. Judge Harry M. Rimer, Clarion, Pa., heard the case and imposed the sentence.

Judge Rimer also presided in the case of James D. Sweeney, Clarion, and sentenced him to five years in prison, imposed a \$1000 fine and revoked his hunting license for ten years for careless shooting in the 1936 deer season which resulted in the death of Harry Clinger, Helen Furnace.

Of particular significance in all cases so far heard is the fact that only a few of the defendants or their victims wore red.

## FINE HUNTING GROUNDS PURCHASED

The Board of Game Commissioners at its recent meeting approved the purchase of a total of 5,618 acres of good hunting territory which, if finally acquired, will become State Game Lands. The lands approved for purchase, for which contracts are now being prepared, are located in four counties, as follows:

**Blair County;** 3,535 acres on Tussey Mountain, about three miles east of Williamsburg. 3,229 acres of this will be purchased from the First National Bank of Williamsburg, 231 acres from the Borough of Williamsburg, and 75 acres from Mrs. Juniata S. Tinkham.

**Lancaster County;** a 100 acres tract in Colerain Township will, if the title is found to be satisfactory, be purchased from Marvin S. Evans.

**Lycoming County;** a tract containing 700 acres, adjoining other lands now under contract, was approved for purchase from Frank L. Entz.

**Fayette County;** the James P. Carothers Heirs and the Piedmont Coal Company offered 982 acres in Georges Township, which was accepted. These lands connect with other lands now under contract for purchase.

## ATTEND GAME BREEDERS' CONFERENCE

Charles W. Wessell, Chief of Division of Propagation and Game Farms and the four Superintendents in charge of the State Game Farms attended the Second Annual Game Breeders' Conference held at the Waldorf Astoria Hotel in New York City. Superintendent E. C. Smith of Fisher State Game Farm, Superintendent Earl S. Greenwood of the Loyalsock State Game Farm, Superintendent Vernor T. Warfel of Jordan State Game Farm and Superintendent Leon P. Keiser of the State Wild Turkey Farm completed the Pennsylvania representation at the conference.

Papers presented by leading conservationists and game propagators revealed a decided trend toward the raising and liberation of matured Ringneck pheasants and quail in the spring of the year, which is in line with the policy of the Pennsylvania Board of Game Commissioners adopted two years ago. Conservationists from New York, Ohio, Connecticut and other States expressed dissatisfaction with the results obtained from the liberation of large quantities of immature birds and their recommendations pointed very definitely toward the Pennsylvania policy of producing fewer birds of better quality on the State Game Farms. Considerable interest in the planting of natural food and cover for game birds and animals and also in improved methods of game management, was evidenced.

## A PROFITABLE HISTORY

When a law was passed in 1901 giving protection to the beaver in Pennsylvania there was probably not a single beaver left in the State, and nothing was heard of them from that time until 1917, when a pair donated by the State of Missouri, was stocked in Cowley Run, Cameron County.

In the next year or two the offspring from this pair spread through Cameron, Clinton and Potter Counties.

Later on 93 beavers were purchased from Canada as follows: 6 in 1919 for \$180.00; 51 in 1920 for \$1,378.00; 8 in 1921 for \$240.00; 4 in 1922 for \$120.00; and 24 in 1924 for \$600.00—Total \$2,518.00.

In addition to the above, 5 beavers were presented to the Commission in 1922, making the total number stocked 100, at an average price of \$27.07.

The first open season on beavers in Pennsylvania was declared in 1934 at which time 6,455 animals were taken having an estimated fur value of \$58,095. In 1936 another open season was declared at which time 2,261 were taken having an estimated fur value of \$21,500. Thus in these two seasons alone the trapper caught a total of 8,716, with \$79,595 profit on his original investment.

Does with antlers aren't such uncommon critters after all. Received a number of reports of them this year, the latest from Refuge Keeper Hugh E. Baker, of Asaph. Hugh said the animal was struck by a B. and O. train. The antlers protruded much lower on the front of the head than those of a buck's.

## NEW LITERATURE

**RODENT CONTROL:** A very interesting discussion of the methods used to combat these creatures, by Stanley R. Young, Chief, Division of Game Management, U. S. Biological Survey, Wildlife Research and Management. Leaflet BS-54.

**MORE UPLAND GAME BIRDS:** This booklet is designed to show the principal causes of the decrease in numbers of our native upland game birds, the need for the cooperation of the farmer in any plan to improve upland game bird shooting, and to point out how that cooperation can best be secured. **MORE GAME BIRDS IN AMERICA, INC., 500 FIFTH AVENUE, NEW YORK.**

Penalties collected for violation of the Game Laws during December amounted to \$17,191.50.

Game Protector John Lohmann, Schuylkill County, is doing some splendid educational work in his district.

## A DISCUSSION ON DUCK IDENTIFICATION

Editor's note: The following correspondence between Major Nicholas Biddle, President of the Game Commission, and Dr. Ira N. Gabrielson, Chief, Bureau of Biological Survey, Washington, D. C., is self-explanatory:

Dear Dr. Gabrielson:

I have just returned from a two-day ducking trip on Chesapeake Bay, and hasten to write you while the facts that the trip brought forth are fresh in my mind.

I felt, like many other duck shooters, prior to this season, that I could distinguish most species of waterfowl in flight, although I never went so far as some of my friends, as to stake my reputation on the different species of ducks at long distances. However, I always knew the protected ducks such as wood duck, ruddy duck and bufflehead, as they differ in size and general habits from the larger diving ducks and surface feeders.



Thousands of cottontail rabbits fall prey to the steel trap annually.



## CURRENT TOPICS

Nevertheless, since the season has been closed on canvasbacks and redheads, I find many of my positive friends who heretofore identified ducks at great distances, without fear of contradiction, have suddenly developed a marked timidity to identify any duck which is within shooting distance. Personally, I am unable to distinguish between a female redhead and a female broadbill (Greater Scaup) when on the wing, and I find that many duck shooters cannot tell the difference when they have them in the bag. The result has been that some duck shooters are so fearful that they have broken the law, that they bury all of their birds, in fact, the Federal Wardens told me that they had found a number of Whistlers (Golden Eye) buried, as the owners had thought they were buffleheads.

I am vitally interested in conservation, together with providing as much shooting as possible for licensed hunters, but I do not feel that the present closed season on canvasbacks and redheads is in the best interests of conservation, as it makes law-breakers of sportsmen who do not wilfully desire to break the law. This is not true of such conservation measures as limiting shooting from 7:00 A.M. to 4:00 P.M., no baiting or live decoys, and the ban on floating blinds and guns holding more than three shells in the magazine.

These laws are enforceable and if not adhered to, are generally broken deliberately. I strongly recommend the ban on canvasbacks and redheads be lifted next season, for fear that it will make the average duck hunter a law-breaker, which will, in turn, break down respect for the other constructive regulations which your Department has put into effect.

Signed: Nicholas Biddle.

Dear Mr. Biddle:

There is, of course, much in what you say about the difficulty in identification of migratory waterfowl, particularly at any distance. While the female Redhead unquestionably complicates the picture, nevertheless, the only other female ducks having broad gray wing bands are the canvasback and the ringneck. The former is larger, paler and differently shaped, while the latter is smaller, darker and has a conspicuous white eye-ring and a ring on the bill.

We are distinctly worried over the future status of the Redhead, which has probably suffered more than any other of the important game species. The situation you describe is undoubtedly very real but it has come to the point where sportsmen just must learn their birds. It has always seemed strange to me that while baseball fans will remember the batting and fielding averages of a great many major league players, duck hunters should resent being called upon to learn the simple identification of the birds they desire to shoot. Just what can be done to help the situation, I cannot now say, but if, by a change in existing regulations, we can improve conditions, eliminate waste and keep otherwise honest sportsmen from being violators, you may be sure we will be only too happy to take appropriate action.

I am sending copies of this letter to Mr. LeCompte and to Mr. Gordon.

Signed: Ira N. Gabrielson.

Dear Dr. Gabrielson:

I wish to acknowledge and thank you for your letter of December 30th.

I agree with you that duck shooters should know their birds, the same as baseball fans know their ball players. I realize your anxiety over the future status of the redhead duck, and that their protection without making law-violators out of otherwise honest sportsmen is a most difficult problem.

I am planning to print our correspondence in the Pennsylvania Game News, if you have no objections.

Signed: Nicholas Biddle.

### SPORTSMEN HONOR CREVELING

Two hundred sportsmen from the lower part of Luzerne County paid tribute to J. Q. Creveling, Vice President of the Pennsylvania Game Commission at a testimonial banquet held at White Haven, January 21. Mr. Creveling was presented with a radio in appreciation of his efforts in the behalf of game conservation in Pennsylvania.

Commendatory letters on the Game Commission farm-game project display at the Farm Show are still coming in, a tribute to those who contributed to the success of the exhibit. The individuals whose ingenuity devised and constructed it were Refuge Keeper George Koehler, of Lycoming County; Game Protector Edward Stucke of Philadelphia, and Henry Schell of the Bureau of Education. Others who assisted in its preparation were Game Protector Mark Motter of Dauphin County; John B. Sedam of the Bureau of Refuges and Lands; Traveling Game Protector O. M. Pinkerton of Lycoming County, and Kenneth Fors, of the Bureau of Accounting and Budget.

Officers detailed as instructors were Clarence Walker of Snyder County; Herman F. Fisher of Juniata County, and Joseph Foreman of Cumberland County.

The Conservation Commission of New York State is seeking legislation giving them discretionary power to declare seasons and bag limits.

The boys up in Somerset County have laid the groundwork for an extensive feeding program. Under the direction of David Barnhart the N. Y. A. already have erected 30 feeders with plans for nearly 1000 before the winter is over. A fine piece of work. Let's have more of it.

One contemplated game law change which has pleased everyone so far is the set time limit to start and stop hunting. Seven o'clock has been suggested for the morning and five o'clock for the afternoon. If this regulation goes through it will be a great game saver. No turkeys will be shot on the roost, no grouse will be killed from automobiles while budding on the grapevines at dusk, nor will pheasants be bumped off while feeding at eventide.

A bunch of the boys put on a drive to estimate the number of deer in a given area. Going to Hickory Run National Park near White Haven they lined up on a mile front and drove half a mile in a semi-circle. The watchers counted 104 deer, many of them fine bucks. Technicians of the National Park service figured the estimated deer population of the park at 1,596 animals for fourteen square miles.

Game Protectors and their assistants are doing everything they can to safeguard the seed stock left over from the last hunting season. In this work they need the cooperation of every true sportsman.



Thousands of waterfowl will soon be winging their way northward. The Pymatuning waterfall refuge provides an excellent feeding and resting grounds.

### NOTICE

All applications for pheasant eggs must be filed with the Game Commission prior to March 15, 1937.



# Management of the Cottontail Rabbit in Pennsylvania

(Continued from Page 7)

The rabbits are shipped from the various points in Kansas and Missouri to Pennsylvania by Railway Express. They are forwarded in specially constructed crates each containing one dozen rabbits singly confined in separate compartments, the bottoms of which are filled with alfalfa hay and placed wherein is a large piece of apple, thus supplying food and moisture during the forty-eight hour trip.

## Transportation Mortalities

Shipment has been made on a live arrival guarantee basis with the understanding that the shipper will replace rabbits received dead with live rabbits up to the value of the express charges on the dead rabbits. Also, the animals were carried by the Railway Express Company at first class rates with the proviso that neither the Game Commission nor the shipper would place charges against the Company for shipping mortalities.

The transportation mortality on 50,000 or more rabbits has run from 3% to 7%, depending upon the condition of the rabbits, weather and other factors. This loss has been greatly reduced through the invention and patent of a specially constructed center-ventilated shipping crate by Mr. Ben F. Tarman of Quincy, Pennsylvania, one of the Commission's regular shippers.

## Cost

The rabbits annually purchased have been contracted for on an F.O.B. basis with the understanding that the Commission would pay transportation costs on the crates and rabbits coming East and on the empty crates going West.

The price per rabbit has varied from year to year with a gradual tendency toward reduction. Between June 1, 1926 and May 31, 1936, the Commission purchased a total of 556,797 rabbits at a cost of \$418,623.27, or at an average price of \$0.752 each. Expressage on the animals and crates totaled \$145,041.14, averaging \$0.26 per head. Thus, the average cost of each rabbit delivered to a central point in the several counties of the Commonwealth and not including the cost of distribution within the counties was \$1.01.

In all fairness, it must be stated that rabbits could have been purchased from Oklahoma, Texas and certain other Western States at a lower price than from Missouri and Kansas, but the quality of such animals proved inferior and they were not available in the numbers desired.

Recalling the fact that costs herein shown do not include those involved in distributing the rabbits throughout the various counties, it may be said that the Pennsylvania Game Commission expended during the twenty year period from June 1, 1916 to May 31, 1936 well over \$725,000.00 for the purchase and release of 716,167 cottontail rabbits.

## Size of Releases

The initial release of 2,668 rabbits in 1916 was increased to 3,186 in 1917, but adverse weather conditions necessitated cancellation of shipments in 1918, while the relatively high value of dead rabbits for market purposes practically eliminated the supply in 1919 and 1920, with the ultimate result that during the three years last mentioned less than 1,000 animals were purchased and released. Between 10,000 and 14,000 individuals were stocked annually from 1921 through 1923 and over 34,000 animals were planted in 1924. More than 58,000 specimens were turned out in 1925 and since that date

the annual average has approximated 57,000 with an all-time high of 80,519 in 1928. The table below shows the average annual release figure for the four five year periods under consideration, while Figure 1 graphically portrays the annual releases for the same period:

Five Year Period	Average Annual Release
1916-1920	1,315
1921-1925	28,350
1926-1930	57,333
1931-1935	56,235

## Time of Releases

Although the period of year has been well recognized as one least propitious for the release of game, it has been found necessary to restock the cottontail rabbits purchased during the months of December, January and February. Such action has been roundly criticized by many interested persons, but the reasons for it are, when truly known, quite simple.

It is possible to trap rabbits in the large numbers desired only during the late fall, winter and early spring. Late fall shipments could probably be made without unduly high transportation mortality, but because of the heavy concentration of gunners in the field in quest of small game up until the last of November, it has been deemed inadvisable to release rabbits until after the close of the open season for small game when they may pass through at least one season of natural propagation before facing an open hunting season. Early spring delivery is prohibited by excessive shipping losses due to the fact that from the end of February on, the majority of the females have been found to be pregnant and the effects of shipment

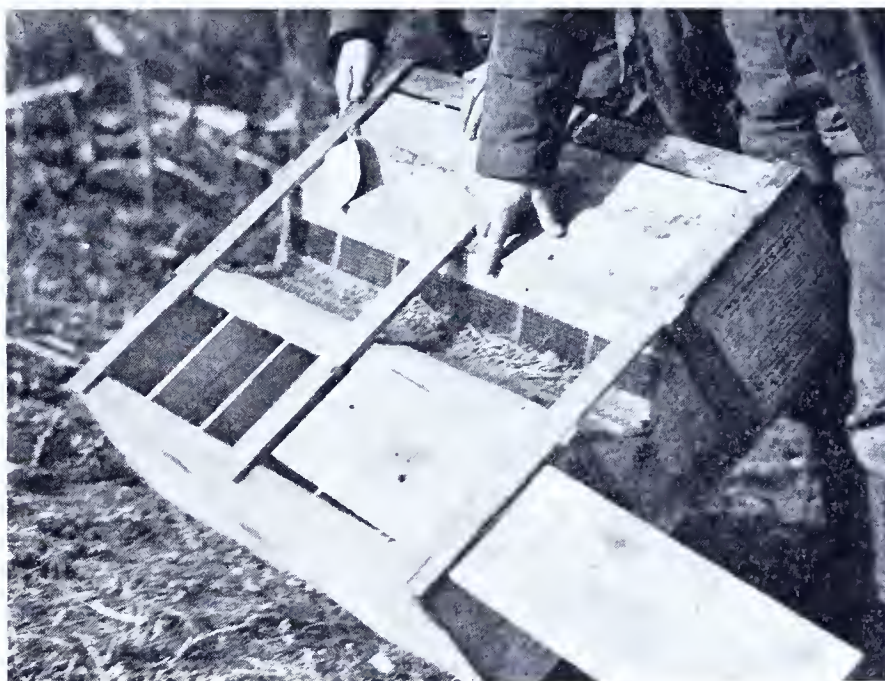
usually result in the loss of the young or old or both. Thus, the only time suitable for shipment is the mid-winter months when climatic conditions are most severe.

## Losses Immediately Following Release

It has been impossible to measure the rabbit losses immediately following release, but it is probable that these are in many cases exceptionally high and on the average truly appreciable. The number of rabbits occasionally found dead several days after release bears mute testimony of the fate frequently suffered by many others. Were it not for the fact that "sick" rabbits usually seek seclusion under piles of stones, in hollow logs or in holes, it is possible that far more dead animals would be picked up following winter releases.

To gain some conception of the condition of the rabbits at the time of release, we need only stop to consider what the animals have gone through immediately preceding liberation from the shipping crates. A rabbit caught in a box trap during the early evening hours remains confined in the trap for eight to twelve hours, whereupon it is removed, dropped in a sack and hauled fifteen or twenty miles by truck to the shipping point, where it is placed in the small cell of a crate with a supply of hay and apple sufficient for forty-eight hours. From the time the animal enters the trap until the crates are loaded on the express trains, roughly twenty-four hours later, it is subjected to "outside" tem-

(Continued on Page 30)



Patented center-ventilated shipping crate which assures minimum shipping losses.



# Farm Game Management In Silesia

(Continued from Page 13)

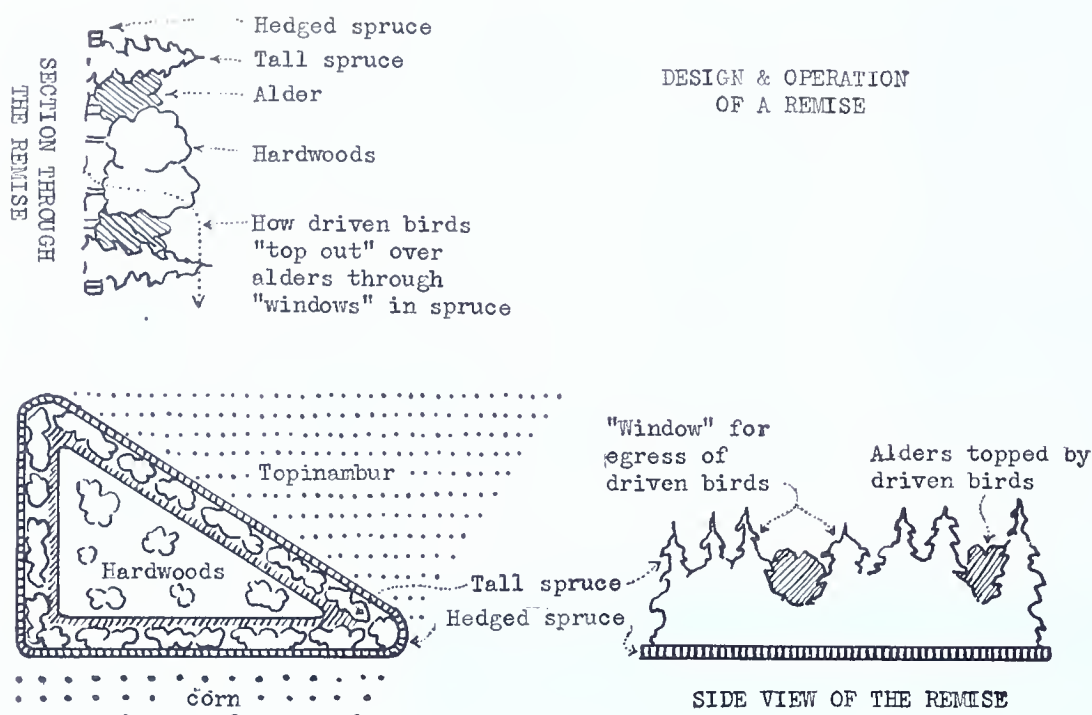


FIGURE 1

out of the hay and into the grain. Any early nests found are lifted and the eggs transferred to the artificial propagation plant.

The second system is to dog the hayfields just before the hay is cut for the purpose of locating nests, and to transfer the eggs for artificial propagation. Such eggs are, of course, already partly incubated, and must be transferred speedily, set by set, to avoid heavy loss.

The third is to dog and mark the hayfield nests, and to leave islands of uncut hay so that the pheasant can complete her hatch. This system has, of course, been tried in America, but with pretty heavy crow losses. I am assured that crows are kept low enough in Germany that the system is reasonably safe, and that it is wisely used by small farmers who lack time to operate propagation plants.

Flushing bars are unknown.

Propagation systems in Silesia are identical with ours, except that mechanical incubation and brooding are rare, and turkeys as well as chickens are used as foster mothers. Rearing fields are commonly not placed on clover, but rather on haymeadow. Pens contain live growing spruces as cover. The turnips grown as a soiling crop in pens come right up to the stems of the hedged spruce trees.

Usually only hayfield eggs are artificially propagated, but a few holdings produce and propagate additional eggs, and I saw at least one which operates as a commercial game farm. Other large holdings depend wholly on natural propagation. The commercial game farm which I saw used turkeys for foster-mothers, reared in open fields with "A" coops, let the young go wild, shot only cocks, and then trapped the excess hens for sale. This wild stock is preferred for restocking purposes.

sparingly by the owner, and usually after the big shoot.

The "big drive" consists in pushing the birds from one remise to another, over the heads of the intervening line of guns. The remise system, however, may cover only a fraction of the hunting unit, and lies usually at its center.

The average kill on an intensively managed estate is one bird to each two acres for rich land, and one per five acres for sandy land. I am assured that just about half the fall population is shot, so one may say the fall density on the best estates is a bird per acre, counting both the summer and winter range. The density in the winter range or remise area is of course much greater; I saw 448 pheasants shot in one day out of 11 remises of not over 3 acres each, a kill of 15 birds per acre, of remise cover. Silesia, in other words, achieves a stand of pheasants equal to South Dakota and better than north Iowa, without the standing corn and long grass which make a heavy stand in those lucky states nearly automatic.

I cannot help adding that this achievement must be credited not to sportsmen passing laws and resolutions for each other's governance, but to landowners who go out on their land and practice game management as a natural and widespread adjunct to good agriculture.

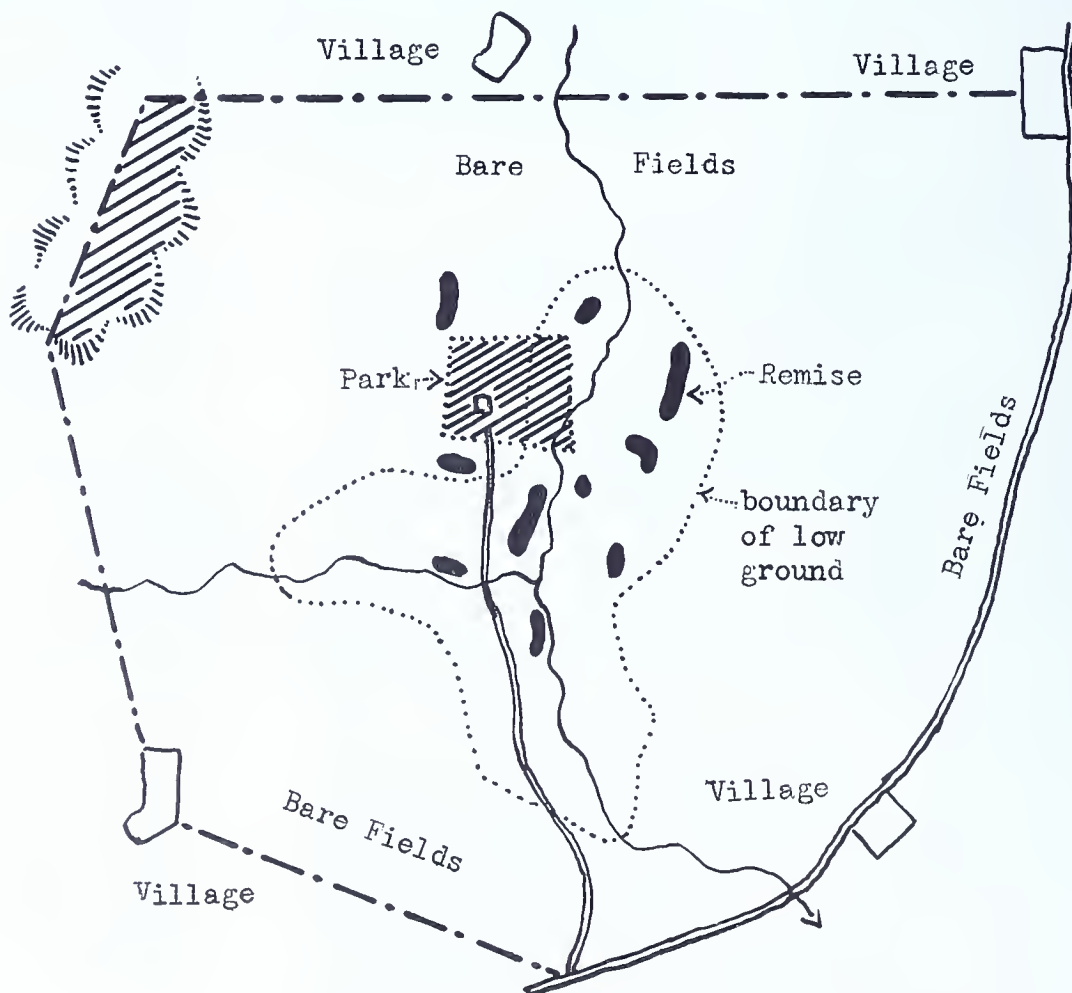


FIGURE 2



# THE SPARROW HAWK

By George Miksch Sutton



THIS handsome bird of prey, which is only a little larger than a Robin, is sometimes called "Killy Hawk," because of his shrill cries which resemble "Killy, killy, killy." He is predominantly red-brown in color, but the top of his head and his wings are blue-gray, and his underparts are light buffy spotted with black. Across his tail, near the tip is a broad band of black. His feet are yellow. His eyes are large, dark and bright, and have a particularly penetrating quality which is characteristic of the Falcon Tribe.

The female bird, which is a trifle heavier than the male, is more heavily barred with black on her back, and her red-brown tail is crossed by many narrow black bands. Her underparts are rather heavily streaked with brownish.

Sparrow Hawks are fonder of grasshoppers than they are of Sparrows. In fact it is rather unusual for them to capture birds. They often eat field mice; and when the little hawks are seen hovering above the fields they are usually searching such prey. Examination of the stomachs of many of these birds, which have been misleadingly named, has proved that they are decidedly beneficial in their food habits. Therefore they should never be shot. The farmer who shoots a Sparrow Hawk is destroying a valuable helper.

Sparrow Hawks may occur during the entire year in Pennsylvania, but they are usually somewhat rarer in winter. In spring they select a natural cavity in a tree, or perhaps a bird-box which has been placed for them, as a nesting site, and the female lays her four to seven almost round eggs which are often very deep rusty brown in color, and rarely very noticeably blotched. The young birds are hatched on the bare floor of the cavity, and sit about for some time on the heels of their weak feet. They cry loudly when the parent birds return from a hunt with food.

When their wings have become strong enough they fly about with their parents and soon learn to capture grasshoppers and other insects. During late summer families of Sparrow Hawks, sometimes as large as nine in number, may be seen flying about the fields, perching here and there on telephone poles, or hanging in the air on rapidly beating wings.

In the winter the birds often roost about barns or other buildings, and are often quite tame. If English Sparrows are particularly abundant the little Hawks may capture these pests occasionally.

The Sparrow Hawk has been called by many the most handsome American bird of prey. The American species is closely related to the English Kestrel, a common species of the British Isles. The closest counterpart of the Sparrow Hawk in America is the Pigeon Hawk, a rapid-flying, fierce creature, which occurs in Pennsylvania only as a migrant.

## LAMENTATIONS OF BR'ER RABBIT

Said an old Mother Rabbit to her daughter gray,  
Come listen dear Child, to the things I will say;  
I must tell you the sad story, for it's just this way,  
Life is hardly worth living in this rapid fire day.

When I was a child, the size of you,  
We played and we romped, and had nothing to do,  
Our good friend the Woodchuck kept us safe from all harm,  
In the burrows he dug 'neath the rocks on the farm.

# THE NASAL BOT-FLY

By A. B. CHAMPLAIN

Advanced Entomologist, Pennsylvania Department of Agriculture

AMONG the interesting insect specimens received for identification by the Entomological branch of the Department of Agriculture, during 1935, were adults of the nasal bot-fly of deer. The species was found to be new to the State insect collection and for verification was submitted to a specialist at Washington, D. C.

This insect belonging to the fly family, Oestridae, is known scientifically as *Cephenomyia phobifer* Clark. The species of the genus *Cephenomyia*, are known to live in the larval or maggot stage in the nasal passages, on the soft palate, at the base of the tongue, in the Eustachian tubes and pharynx of various members of the deer family.



The species under discussion was collected at Renova, Pennsylvania by Mr. W. F. Mason of the Game Commission. The dates were June, 1935 and August 25, 1935. Quoting from Mr. Mason's letter—"I am sending two flies which I am sure are the ones that sting the deer on the nose and cause the maggots which enter the deer's head, etc." In explanation, the fact of the matter is, the flies did not sting the deer but flew about the animals, depositing their young (living maggots in this case) one by one in the nostril or on the deer's nose. The deer instinctively realizing the seriousness of the attacks, attempt to escape by closing their nostrils, striking out with the fore feet, snorting, sneezing, rubbing the face or in other ways showing their uneasiness.

The maggots, upon being deposited, attach themselves to the nasal openings with tiny hooklets and from there enter the head.

*Cephenomyia phobifer* Clark, has been reared from maggots collected in the nasal passages of white-tailed deer in New York State according to Mr. D. G. Hall of the United States Bureau of Entomology, while the original description of this species indicates that it was first found in Georgia.

The flies themselves are seldom observed and are generally difficult to capture. They are black with fine yellow hairs on the thorax, dark on the other parts of the body which is about nine-sixteenths of an inch in length, and the two wings are each about one-half inch long. It is an interesting fact that these flies, which are the adults of the species, have no functional mouth parts. They do not eat, but devote their whole life to the propagation of the species; first the mating—then the females, which in this case are the hunters, with swift and unerring instincts, locate their quarry.

Hunters and persons interested in wild life might contribute valuable data to our knowledge of these little known insects, if they would send their notes or observations with specimens when possible, to the Entomologists or Biologists of State or Government institutions.

But the burrows today are all filled up with sand,  
There is not a chuck living anywhere in the land;  
For the Chucker came down with a scope on his gun,  
And he shot and he shot till he got the last one.

And then came the smoker with a cig in his face,  
He threw down the match stick and burnt up the place:  
And now the cover is so skimpy and small,  
It really ain't any cover at all.

By day and by night, we go dodging around,  
With eyes wide open for a fox or a hound;  
If we cross the road we'll be hit by a car,  
So the best we can do is stay where we are,

When winter comes on we are clear out of luck,  
For we can't dig a hole like our old friend the Chuck;  
So hardships are with us and with us to stay,  
Making life just a burden in this rapid fire day.

J. G. W. Dillin  
Media, Penna.





## QUESTIONS AND ANSWERS

Q. What is a gopher? Are there any in Pennsylvania?

A. The gopher is a western animal similar to our native ground squirrel. It is a burrowing animal, making its home in the ground. There are no gophers in a wild state in Pennsylvania. They inhabit the prairies of western United States.

Q. Are there two kinds of mink?

A. There is only one species of mink found in Pennsylvania. White spots occasionally occur on our native mink, but that does not indicate a distinct species. It is merely a color variation of our native mink.

Q. Is it legal to shoot mink, muskrats or beaver in season except in traps?

A. Under our present trapping regulations, it is legal to shoot mink in season, but the shooting of muskrats and beaver is strictly prohibited.

Q. Is it legal to hunt for fox at night with a light if I use a shotgun with shot cartridges only?

A. Yes. However, it would be a violation of the Game Law to throw the rays of a light upon any deer, elk or bear while having firearms in possession, regardless of whether any shots were fired. The penalty for this offense is \$100.00.

Q. What is the law in regard to shooting from a public highway and within a certain distance from same?

A. At the present time there is no law prohibiting the discharge of firearms from a public highway. There is a law forbidding the discharge of firearms within 150 yards of occupied buildings, and any shooting on highways within this distance of buildings would be illegal under penalty of \$25.00.

Q. What is the law in regard to having a loaded firearm in a car, and is a rifle regarded as loaded if chamber is empty and there are cartridges in magazine only?

A. There is no law at this time to definitely forbid one from having a loaded rifle or shotgun in his automobile, except possibly that portion of the Game Law prohibiting the use of artificial lights on big game while having guns in possession. We would consider any gun loaded which has a shell in either the chamber or the magazine.

Q. Are the above laws Game Laws or State laws and what is exact procedure to prosecute for violation?

A. The Safety Zone Law is not a Game Law, but the other Law above referred to is. An individual can prosecute a violator of the Game Law by making information against him before the nearest Justice of the Peace or Alderman.

Q. What is exact procedure to prosecute a hunter for trespass?

A. Violators of the Trespass Law can be prosecuted in like manner.

Q. Is it legal to snare foxes in Pennsylvania?

A. There is nothing in the Game Law to prohibit snaring foxes in Pennsylvania at any time if the snares are marked with a metal tag giving plainly the name and address of the owner, and are visited every thirty-six hours the same as steel traps. It is strictly unlawful to capture any game or fur-bearing animals with a snare.

Q. If I have a pistol registered with County Treasurer in connection with a hunting license, can I take this pistol out in the country for target practice in the summertime?

A. No. Pistols registered by a County Treasurer may not be carried for the purpose of target shooting. Under that registration, the pistol may be used only for hunting, fishing and training dogs.

Q. Do deer shed their hair?

A. Yes. The red coat of summer is shed and in its place grows the gray coat of winter.

## RECENT PREDATOR STUDIES By PAUL L. ERRINGTON

(Continued from Page 14)

Cooper's hawks are adapted to capture swift-flying birds, but most of the birds they catch are comparatively poor fliers or sluggish juveniles; and they may even prey heavily upon such mammals as ground squirrels when these are conveniently available. Screech owls turn readily from mice to small birds and then to insects, as the relative availability of their prey changes from winter to summer. Horned owls sometimes station themselves adjacent to farmyards, yet whether they feed upon the chickens or the barn rats, or upon both, seems predictable in terms of what is easiest for them to get.

Response of predators to availability of prey is simple to understand, but understanding of the factors governing availability is anything but simple. Availability of prey to predators signifies exposure more than anything else and this reflects the complicated relationships between living organisms and their environment and between each other. In the course of natural frictions and emergencies, some groups of organisms always seem to be in difficulties; and as one group gains increased security, another finds itself becoming more vulnerable.

Over-population of environment, floods, fires, clearing or cultivation of land, seasonal changes in vegetation—all serve to place some animals at enough disadvantage to make them easy prey of their enemies. In other words, a predator's diet is to an important extent automatically composed of what we, as human beings, would call windfalls.

In north-central states, there seldom appears to be any lack of prey of some kind which may be available without much trouble to predators. These are preyed upon in the approximate order of their vulnerability, if not by their usual enemies, perhaps by some others, perhaps by some not reasonably thought of as enemies except under rare circumstances. In the event of increasing unbalance, some animals may be more often preyed upon or killed by their own kind than by even their most formidable natural enemies.

The primary requirement for predation is

that there be animals available to be preyed upon. This requirement fulfilled, almost an endless variety of creatures may on occasion do the preying, except when the prey itself is of larger size or too formidable for many predators to attack. Then, the biological picture may not be one of predation so much as of parasitism, a rather closely related natural phenomenon.

From the standpoint of economics or of wildlife management, some reduction in the numbers of certain predators may now and then be desirable, but it is hard to see virtue in the blind and excessive practices too often indulged in. Animal populations being to a large extent self-limiting within the bounds imposed by environment and heredity make-up, much of the predation upon them doesn't really seem to count anyway, conspicuous though it may be.

By all odds, what amounted to the most effective predator control I've ever seen was accomplished on a wildlife refuge where hawks and owls were protected along with the other native residents, but where the rood and cover relationships were handled intelligently.

## MANAGEMENT OF THE COTTON-TAIL RABBIT IN PENNSYLVANIA

(Continued from Page 27)

peratures, sometimes even below zero. In the express car for forty or more hours, the temperature remains constantly above the freezing point, while upon arrival at their destination the crates are once again set on railway platforms or other places of "outside" temperature. Hauled another twenty-five miles over rough country roads, then carried several hundred yards, the animal is finally picked out of the crate and released, more often during the daylight than the dark, in an entirely strange location, often with snow on the ground and the temperature close to the zero point. In other words, constantly confined, thoroughly frightened and subjected to radical changes in temperature for a period of over sixty hours, the animals are then turned out in midwinter in an environment completely unknown. Little is the wonder that occasional losses are reported immediately following release and logical appears the supposition that year in and year out such mortalities are high in percentage of the total plantings!

*Editor's Note: This is the first of a series of articles on the management of the cottontail rabbit. Another angle of this important problem will appear in the April number.*

If you are pining away for something to do some Saturday afternoon or Sunday get the gang together and start rounding up the wild dogs which are so alarmingly numerous this winter. Just read the other day where farmers in lower Schuylkill County are up against a regular pack of the varmints. Don't lose such a splendid opportunity to help the landowner, also the game.

A trapper down in Tinicum Twp., Bucks County, ran across a German Shepherd and a mongrel collie chasing a nice big buck. He shot at the dogs to frighten them off. He says the deer, a handsome specimen, had been literally torn to pieces and eaten alive by the vicious canines.



# AN ANALYSIS OF THE FARM GAME PROGRAM

(Continued from page 10)

the central and northern counties, but offsetting this are the many persons from those forests counties who hunt farm game in the twenty-one counties mentioned. It is, therefore, assumed that between 225,000 and 250,000 hunters seek their favorite sport in these twenty-one counties. If this is true, which seems likely, and if all farm acreage were open hunting territory, there would be only about 25 farm acres per hunter, as compared to 34.6 acres per hunter for the State as a whole. However, since so many farms in the twenty-one counties are posted against trespass, it is doubtful whether even 15 acres per hunter are open. This in itself seems to provide sufficient justification for the Commission to limit the expenditure of such funds as it can allocate for Farm Game Refuge Projects to the twenty-one counties decided upon.

## STATUS OF FUNDS FOR REFUGES AND PUBLIC HUNTING GROUNDS

The story cannot be completely told without considering finances. As previously stated, the Commission can go no further with the program than its funds will permit.

Approximately \$386,000 a year are now available for extending, managing and developing our system of game refuges and public hunting grounds, which represents the sum of 75c from each resident hunting license fee earmarked by law for this purpose. Out of this must be paid the salaries and travel expenses of a maximum of 44 refuge keepers and 28 other field and office employees of the Bureau of Refuges and Lands; the ordinary maintenance and protection of nearly three-quarters of a million acres of land comprising game refuges and their accompanying public hunting grounds; the development of better game food and cover on these lands; the purchase and leasing of lands and establishing and maintaining refuges thereon; providing homes for refuge keepers and office expenses of the bureau in Harrisburg; fixed charges on State Game Lands in lieu of taxes; boundary line surveys; title abstracting and conveyancing; purchase of equipment and supplies, etc., etc. The bureau's budget for the present fiscal year, based on an estimated sale of 515,000 resident hunting licenses, was set up to provide for expenditures, in round numbers, as itemized below. The sale of licenses exceeded the estimate by a little more than 15,000, so the bureau's funds will be increased about \$12,000.

### Budget Allotments for Refuges and Lands:

Administration, including salaries, travel and office expenses, etc.	\$ 42,000
Ordinary maintenance of refuges and lands, including salaries and travel expenses of refuge keepers, labor, equipment and supplies, etc.	125,000
Fixed charges on State Game Lands in lieu of taxes.	27,000
Construction and maintenance of buildings.	34,000
Food and cover development.	33,000
Boundary line surveys.	26,000
Title abstracting and conveyancing.	33,000
Game Commission Training School.	11,000
Division Supervisors.	5,000
Farm Game Refuge Projects.	50,000
	<b>\$386,000</b>

The item for the purchase of State Game Lands is not included above, since no part of the estimated revenues of this year were allocated for that purpose. Under present conditions the only funds which might be allotted for that purpose are those accruing from unexpended and uncommitted balances at the end of the fiscal year.

### WHAT MIGHT BE ACCOMPLISHED WITH \$50,000

The \$50,000 provided for Farm Game Refuge Projects during the current fiscal year was a generous proportion of the bureau's available funds. Out of it is paid all expenses incurred in securing leases of the hunting rights for farms, the establishment of refuges, their management and development, and the protection of farm property and livestock.

**Cost of the First Farm Game Refuge Project:** Although \$50,000 seems to be a generous sum, it is a decidedly small amount with which to accomplish much in twenty-one counties of the State, with their 78,000 farms aggregating five and one-half million acres.

An analysis of costs for setting up Project No. 1 in Chester County will explain why. About \$500 was expended in securing hunting right leases for 1,507 acres, or 33c per acre. It is granted that this appears high, but is certainly indicative of the time and effort required to secure this first large contiguous acreage. The smaller acreage now permissible should be secured with much less proportionate time and effort and, consequently, a much lower per acre cost should follow in the future.

**Establishing the Twelve Units,** including wire, posts, lumber for backs for posters, tools, labor and travel expense, etc., cost about \$1,000 or 73c per leased acre.

The above expenditures for securing leases and establishing refuges, about \$1,000, need not be repeated again during the next ten years, and may be considered in the nature of a capital expenditure. They may logically be charged off at \$160 per year, which would mean almost 11c per leased acre per year.

Protection, i.e., patrolling, during the hunting season cost \$276, or about 18c per leased acre, no higher than can be expected. Such an expenditure must be met annually.

Managing the area also constitutes an annual expenditure. Just what the outlay will be to improve food and cover conditions on this particular project is not known, but may amount to several hundred dollars per year. In order to arrive at some sort of an estimate of the operating cost of such projects, we may assume that

intensive food and cover work on a project of this size will amount to \$200 a year.

Thus the yearly estimate cost of a project of this size may be summarized as follows:

Securing leases	\$ 500
Establishing refuges	1,100
	<b>\$1,600</b>

which pro-rated for the ten-year period allows,

Per year	\$ 160
Protection	276
Food and cover development, etc.	300
	<b>\$ 736</b>

or about 50c per leased acre per year.

**Future Possibilities:** Expenditures for other projects may be much less, especially if sportsmen will aid the Commission in locating, acquiring leases for, and managing these projects. However, on the basis of 50c per acre, the Commission might secure 100,000 acres for Farm Game Refuge Projects with the present funds available. That, at first glance, looks like a large acreage, but, regrettably, it merely represents less than half an acre per hunter in the twenty-one congested counties in the southeast and southwest sections of the State. Even a million acres of farms with numerous small-sized but well-managed refuges in these sections would be none too large an area to accommodate

225,000 to 250,000 hunters. Unfortunately, at 50c per acre, the only figure available to use as a guide, that would necessitate an annual expenditure of \$500,000—a sum which may be considerably lower, but with present obligations, funds are not available to push forward anything like so ambitious a program.

On the other hand, how can anything like 100,000 acres of farm and intermixed game lands be secured in any other way in those sections; also, how can so large an acreage be placed under a system of intensive management leading to the production of a maximum annual small game crop?

Experience shows that only a few small tracts of land suitable for game, can be purchased in the counties named for less than \$25 to \$50 per acre. Suppose numerous excellent small game areas of 300 acres or more, and areas so small mean very little to a large number of hunters, were available near large centers of population at an average of \$50.00 per acre. \$50,000 would purchase only 1,000 acres per year, leaving nothing with which to manage and develop the areas. Our experience on the State Game Lands in the forest counties indicates that the cost of managing those lands requires real money. Even if suitable lands could be bought at \$30.00 per acre, \$50,000 would buy only 1,666 acres per year.

If \$500,000, or ten times the present amount, were available, over a ten-year period this would permit the purchase of only 100,000 to 166,000 acres, out of the total 5,500,000 farm acres in the important regions in question, and the management costs would be almost as expensive as they would be on privately-owned farm game projects.

In view of the foregoing, it is obvious which plan will assure sportsmen the largest acreage of good intensively managed hunting ground for a given annual outlay.



Farm Game Refuges Furnish Ideal Food and Cover for Quail.



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# SUMMARY STATEMENT OF BOUNTIES ALLOWED ON NOXIOUS ANIMALS FOR THE MONTH OF JANUARY, 1937

Counties	Wild Cats	Foxes	Goshawks	Weasels	Amount
Adams .....	0	12	1	252	\$ 305.00
Allegheny .....	0	3	0	196	208.00
Armstrong .....	0	9	0	432	468.00
Beaver .....	0	3	0	154	166.00
Bedford .....	0	41	0	318	482.00
Berks .....	0	13	6	676	758.00
Blair .....	0	25	2	258	368.00
Bradford .....	0	36	8	569	753.00
Bucks .....	0	25	8	540	680.00
Butler .....	0	7	1	845	878.00
Cambria .....	0	13	1	214	271.00
Cameron .....	1	28	1	11	143.00
Carbon .....	1	17	3	106	204.00
Centre .....	0	122	3	254	757.00
Chester .....	0	0	1	377	382.00
Clarion .....	0	7	0	436	464.00
Clearfield .....	0	83	1	438	775.00
Clinton .....	0	95	0	65	445.00
Columbia .....	0	21	3	352	451.00
Crawford .....	0	2	0	938	946.00
Cumberland .....	0	11	0	226	270.00
Dauphin .....	0	9	2	185	231.00
Delaware .....	0	0	0	33	33.00
Elk .....	0	37	0	228	376.00
Erie .....	0	1	1	832	841.00
Fayette .....	0	55	1	187	412.00
Forest .....	0	3	1	107	124.00
Franklin .....	1	25	4	265	400.00
Fulton .....	0	6	4	112	156.00
Greene .....	0	27	0	76	184.00
Huntingdon .....	0	61	3	339	598.00
Indiana .....	0	14	0	330	386.00
Jefferson .....	0	8	2	376	418.00
Juniata .....	1	15	0	151	226.00
Lackawanna .....	0	28	1	133	250.00
Lancaster .....	0	28	3	513	640.00
Lawrence .....	0	1	0	239	243.00
Lebanon .....	0	8	3	116	163.00
Lehigh .....	0	6	2	283	317.00
Luzerne .....	1	29	1	598	734.00
Lycoming .....	2	173	10	286	1,058.00
McKean .....	0	48	0	378	570.00
Mercer .....	0	2	0	782	770.00
Mifflin .....	0	67	0	123	391.00
Monroe .....	1	12	8	225	328.00
Montgomery .....	0	9	1	412	453.00
Montour .....	0	0	0	71	71.00
Northampton .....	0	7	1	270	303.00
Northumberland .....	0	5	0	181	201.00
Perry .....	0	16	4	203	287.00
Philadelphia .....	0	0	0	18	18.00
Pike .....	2	73	4	97	439.00
Potter .....	1	29	2	107	248.00
Schuylkill .....	0	46	2	519	713.00
Snyder .....	0	16	2	120	194.00
Somerset .....	0	59	2	407	653.00
Sullivan .....	6	9	0	188	324.00
Susquehanna .....	0	75	5	262	587.00
Tioga .....	4	33	1	200	397.00
Union .....	0	23	0	57	149.00
Venango .....	0	17	0	284	352.00
Warren .....	0	6	0	269	293.00
Washington .....	0	15	0	196	256.00
Wayne .....	0	102	5	162	595.00
Westmoreland .....	0	40	0	379	539.00
Wyoming .....	0	26	3	207	326.00
York .....	0	12	2	578	636.00
Total.....	21	1,854	119	19,731	\$28,057.00
Total number of claims 9,110.					

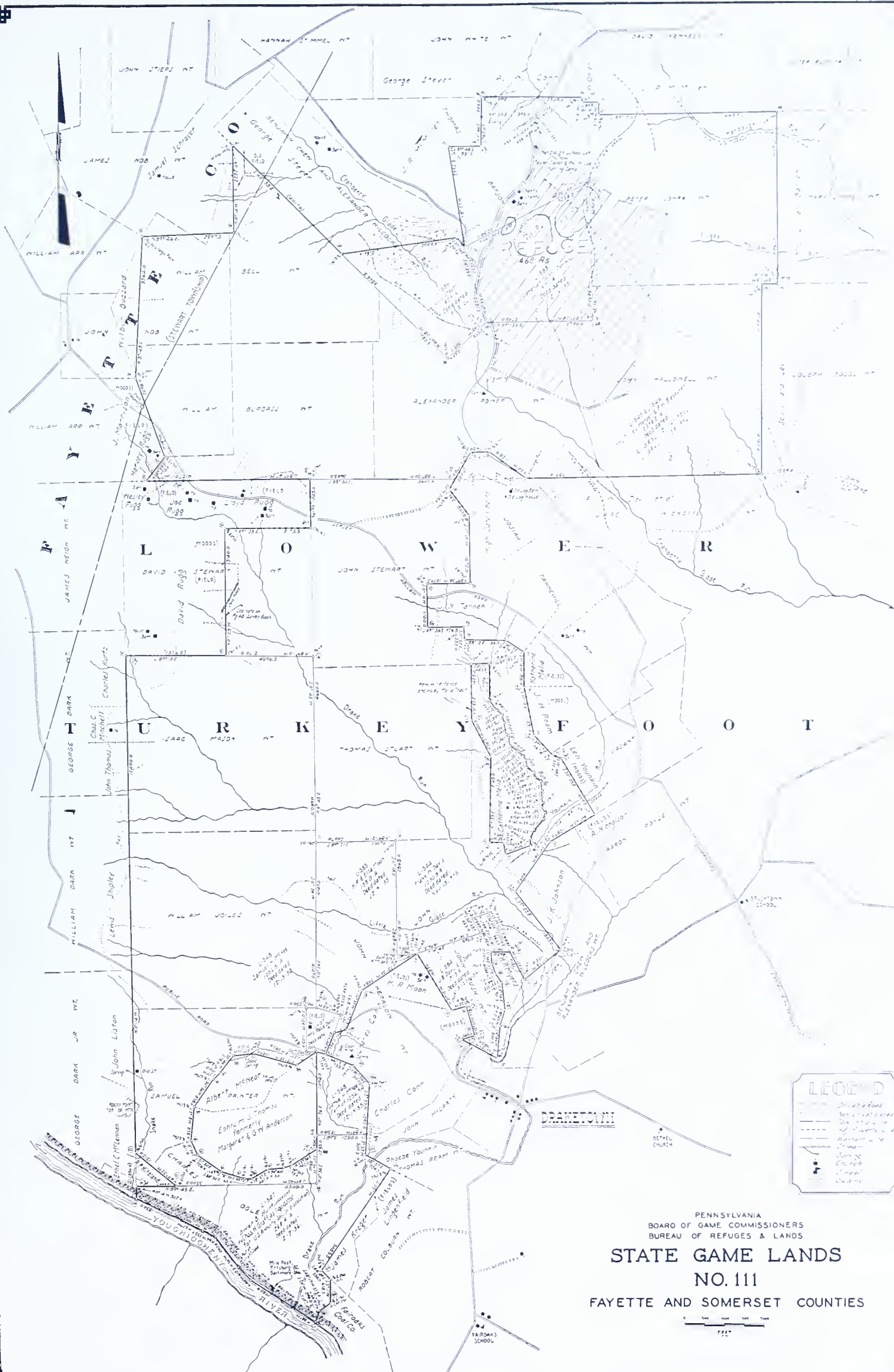
The Capital City Field Trial Association will hold its next outdoor gathering at the Indiantown Gap Military Reservation, Lebanon County on March 30 and 31.

Many entries are expected from neighboring states and competition will be unusually keen.

Let's keep the traps out of holes. To date the Game Commission has released over 50,000 cottontails. Many of these have taken shelter in holes in the ground. A trap set there will either kill or maim the rabbits. Why waste time and money restocking if the careless trapper spoils our efforts.

Wild turkeys have returned to the Canadian prairies which they left nearly 80 years ago and are thriving so well that it is predicted some day they may rival their domesticated cousins. Six years ago five birds were taken from Pennsylvania to the Moose Jaw Wild Animal Park. Since then pairs of birds have been supplied elsewhere and the number is rapidly increasing. Commercial flocks are being established.







# **MR. TRAPPER**

## **CONSERVE THE MUSKRAT**

Excellent weather and high prices has combined to decrease these valuable fur bearers alarmingly.

Take Muskrats sparingly  
from now to end of season.

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**SAVE SOME SEED STOCK  
FOR ANOTHER YEAR**



















